MICHIGAN STATE
UNIVERSITY

DATE: March 7, 2019

TO: Matt Brown via MuckRock – 70079-32344690@requests.muckrock.com

FROM: Rebecca Nelson, Director and Freedom of Information Act (FOIA) Officer
Michigan State University FOIA Office Rebecca Nelson

SUBJECT: FOIA Response

This is written in response to the FOIA request that you emailed to this Office on February 27, 2019.

To the extent records exist responsive to your request, they are among those accompanying this letter, with the following exceptions. Student names and other identifying information, private telephone numbers, personal email addresses, credit card information, and a license plate number have been redacted, and certain entire documents have been withheld, under one or more of the following Michigan Freedom of Information Act (MIFOIA) exemptions. Section 13(1)(a) provides for the withholding of "information of a personal nature if public disclosure of the information would constitute a clearly unwarranted invasion of an individual's privacy." Section 13(2) requires the withholding of information that, if released, would prevent the public body from complying with 20 U.S.C. 1232g, the Family Educational Rights and Privacy Act (FERPA). University email addresses and account numbers have been redacted under Sections 13(1)(u), (y), and (z), which permit a public body to protect records the disclosure of which could compromise its security. No fee will be assessed for this processing of your request.

The MIFOIA provides that when a public body denies all or a portion of a request, the requester may do one of the following: (1) submit an appeal of the determination to the head of the public body; or (2) commence a civil action in the court of claims to compel the public body's disclosure of the records. If you wish to seek judicial review of any denial, you must do so within 180 days of the date of this letter. If the court of claims orders disclosure of all or a portion of the public record(s) to which you have been denied access, you may receive attorneys' fees and, in certain circumstances, damages under the MIFOIA. Should you choose to file an appeal with the University regarding this response to your request, you must submit a written communication to this Office expressly stating that it is an "appeal" of this response. In your appeal, please state what records you believe should have been disclosed to you. You must also state the reasons you believe any denial of your MIFOIA request should be reversed. This Office will arrange for the processing and review of your appeal. Pursuant to Section 4(4) of the MIFOIA, the University's procedures and guidelines for processing MIFOIA requests can be found at http://foia.msu.edu.

Attachments
MSUF019019

FREEDOM OF INFORMATION ACT OFFICE

Michigan State University

408 West Circle Drive
Room 1 Olds Hall
East Lansing, MI 48824
517-353-3929
Fax: 517-353-1794
foia@msu.edu
http://foia.msu.edu

From: Fouty, Amy
To: Anthony, Stephen
Subject: RE:
Date: Tuesday, October 23, 2018 3:47:00 PM

This week is going to be busy and bad for me. Thank you for reaching out.
Let's connect next week.
A

From: Anthony, Stephen
Sent: Tuesday, October 23, 2018 2:51 PM
To: Fouty, Amy <[redacted]
Subject:

Hey Amy, Can you do lunch tomorrow (Wed)?

Stephen Anthony
Associate Athletic Director
550 S. Harrison Rd. 4030C, East Lansing, MI 48823
P: (517) 353-9158 C:[redacted]

From:	Chris
To:	Fouty, Amy
Date:	Wednesday, October 24, 2018 1:48:45 PM
Attachments:	20181024134523095.pdf

This E-mail was sent from "RNPE5A2A3" (MP C2800/LD528C).

Scan Date: 10.24.2018 13:45:22 (-0400)

#1.61

PO Box 148 – 401 N Myrtle Rd
Hammonton, NJ 08037-0148
609-561-7184 Main Number
609-561-0296 Fax
www.ttfarms.com

Fax Quote Sheet

To: Amy @ MSU **From:** Allen

Fax: [redacted] **Pages:**

Phone: 517-490-1729 **Date**

Re: **cc:**

☐ Urgent ☐ For Review ☐ Please Comment ☐ Please Reply ☐ Please Recycle

Job Name: Spartan Stadium

Tuckahoe Turf Bluegrass GameDay Sod "Jr"
~~(30% Bewitched, 30% P-105, 20% Midnight Star & 20% Moonlight SLT Kentucky Bluegrass)~~
OR
Tuckahoe Fescue Turf
(30% Faith, 30% Tar Heel II, 30% Wolfpack II Turf Type Tall Fescues & 10% Tuckahoe Bluegrass)

Area we are quoting in square feet: 19,000

Installation: ~~YES~~ or NO

Fertilize and Lime: ~~YES~~ or NO

Estimated Job Date: Nov 1 or 2nd

Price Good for 30 Days

Unless otherwise stated we lay our turf on your finished grade. You are responsible for the product after it is installed, including but not limited to Watering, Mowing and Regular Maintenance.

NEED ON FLATS / 7 TRUCKS / 1 3/4" PROFILE
GAMEDAY SOD "JR" / NO LOADING DOCK
FORKLIFT ON SITE / INSTALL BY OTHERS

TOTAL PRICE $ 30,590.-

James Betts ttfjames@aol.com
Dave Betts ttfdave@aol.com
Allen Carter acarter@ttfarms.com
Shelli Jackson turfsjackson@gmail.com
Chris Lund clund@ttfarms.com
Dolores Hill dhill@ttfarms.com
Phil Betts ttfphil@aol.com
Maintenance Shop tuckahoeshop@gmail.com

From: Burgess, Julee
To: Allen, Timothy
Cc: Fouty, Amy
Subject: Additional Green Coat Request - MSUFPA Reunion Tailgate
Date: Tuesday, October 23, 2018 11:25:03 AM
Attachments: image001.png

Hi Tim,

MSUFPA has sent me a list of 220 people (109 letter winners) that will be attending their tailgate this weekend for their reunion. Could we put in a request for an additional green coat security at the garage door entrance on the south end of Duffy? We will have that door up and down with catering through the morning and do not want to allow students from their tailgate in. Let me know if I need to do anything for this request.

Additionally, we will have the MSUFPA tickets coordinated and will be giving them nametags for each football letter winner and having a small gift for each member of the 1978 Big Ten Championship team. Thanks!

Julee Burgess
MICHIGAN STATE
Director of Varsity 'S' Club Operations/
Special Events Coordinator
1855 Place
550 S. Harrison Road
East Lansing, MI 48823

O: 517.355.8523
D: 517.884.7370
E: [redacted]

From:	Carey Mitchelson
To:	Doug Johanningsmeier; "Dan Lucas"; "Dan Mausolf"; Fouty, Amy; "Scott Rettmann"; "Holmes Jeff"; "Brad Lazroff"; "Mark Wildeman"; "Matt Gaver"; "Robert Pylar"; Eric Davey; "Curt Boak"
Subject:	Board meeting - Cancelled
Date:	Wednesday, October 24, 2018 8:36:18 AM

All,

Apologies for short notice on cancelling of todays board meeting.
We were not at a quorum and felt that those that traveled long distances would be inconvenienced unnecessarily.

There will be a doodle sent out soon for an early November date and it would be important to have as many attend as possible.
There are items that are in discussion and should be resolved/voted on to continue our planned agenda.

I will be in touch with each of the Chairs to discuss their priorities and send out an email that reflects those items.
Hopefully that will all in the loop so that when we meet we can be prepared properly.

Thanks and we again apologize for the late notice...

cm

Director of Operations
College Fields Golf Club
Office – 517-332-8100
Cell – [redacted]
cmitchelson@collegefields.net

From: Fouty, Amy
To: Jared Knoodle
Subject: Fwd: Boxes here for you!
Date: Monday, October 22, 2018 12:44:59 PM

Sent from my Verizon, Samsung Galaxy smartphone

-------- Original message --------
From: "Ryan, Theresa" [redacted]
Date: 10/22/18 12:13 PM (GMT-05:00)
To: "Fouty, Amy" [redacted]
Subject: Boxes here for you!

Theresa Ryan
Sports Operations
Department of Athletics
Michigan State University
223 Kalamazoo St
East Lansing, MI 48824
517-353-0816 (O)
517-432-3339 (F)

"Be the change that you wish to see in the world." Mahatma Gandhi

From: Fouty, Amy
To: ODonnell, Stephanie; Wahl, Tressa
Cc: Forman, Lynnette
Subject: RE: Emergency field repair at Spartan Stadium - Request partial parking lot 62 E & sidewalk closure
Date: Wednesday, October 24, 2018 4:11:00 PM

Good suggestion, Will do that on Monday for pedestrian clarification.
Thanks,
A

From: ODonnell, Stephanie <[redacted]>
Sent: Wednesday, October 24, 2018 4:10 PM
To: Wahl, Tressa <[redacted]>
Cc: Fouty, Amy <[redacted]>; Forman, Lynnette <[redacted]>
Subject: RE: Emergency field repair at Spartan Stadium - Request partial parking lot 62 E & sidewalk closure

Good with us.

As discussed, it may be good to post something on the fencing that peds will come across, explaining why the area is closed. But since that's simply PR stuff, I'll leave that to you and Amy to decide the best way forward.

Thanks,
Stephanie

From: Wahl, Tressa <[redacted]>
Sent: Wednesday, October 24, 2018 3:59 PM
To: ODonnell, Stephanie <[redacted]>
Cc: Fouty, Amy <[redacted]>
Subject: Emergency field repair at Spartan Stadium - Request partial parking lot 62 E & sidewalk closure

Hi Stephanie,
Per our phone conversation today, please review the attached map showing the partial parking lot 62E & sidewalk closure AND pedestrian detour routes.
Please let me know if this is approved and I will send out a campus wide closure/detour notice.
Thanks,
Tressa

From: Wahl, Tressa
To: Stephanie O"donnell
Cc: Fouty, Amy; formanl
Subject: RE: Emergency field repair at Spartan Stadium - Request partial parking lot 62 E & sidewalk closure
Date: Wednesday, October 24, 2018 4:12:40 PM

Thank you Stephanie. We will post information on the fence.

From: ODonnell, Stephanie [redacted]
Sent: Wednesday, October 24, 2018 4:10 PM
To: Wahl, Tressa [redacted]
Cc: Fouty, Amy [redacted]
Subject: RE: Emergency field repair at Spartan Stadium - Request partial parking lot 62 E & sidewalk closure

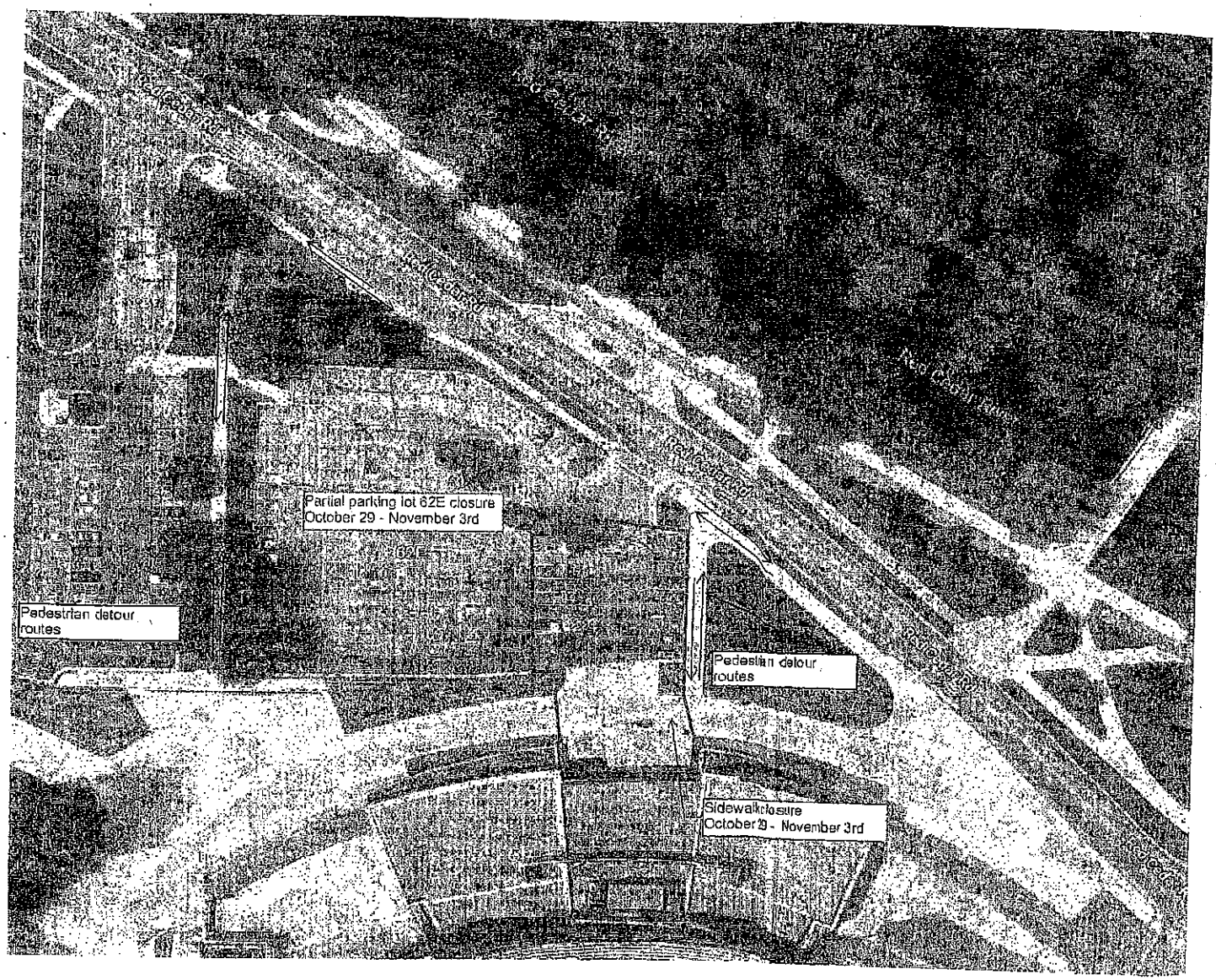
Good with us.

As discussed, it may be good to post something on the fencing that peds will come across, explaining why the area is closed. But since that's simply PR stuff, I'll leave that to you and Amy to decide the best way forward.

Thanks,
Stephanie

From: Wahl, Tressa [redacted]
Sent: Wednesday, October 24, 2018 3:59 PM
To: ODonnell, Stephanie [redacted]
Cc: Fouty, Amy [redacted]
Subject: Emergency field repair at Spartan Stadium - Request partial parking lot 62 E & sidewalk closure

Hi Stephanie,
Per our phone conversation today, please review the attached map showing the partial parking lot 62E & sidewalk closure AND pedestrian detour routes.
Please let me know if this is approved and I will send out a campus wide closure/detour notice.
Thanks,
Tressa


Partial parking lot 82E closure
October 29 - November 3rd
Pedestrian detour routes
Pedestrian detour routes
Sidewalk closure
October 29 - November 3rd

From: Fouty, Amy
To: Ianni, Gregory; Atkinson, Rick; Phlegar, Benjamin [redacted]
Cc: Brian Storm; Brushaber, Sarah; Kesler, Seth; Carter, Kasey [redacted]
Subject: FW: Emergency field repair at Spartan Stadium - Request partial parking lot 62 E & sidewalk closure
Date: Wednesday, October 24, 2018 4:18:00 PM
Attachments: Lot 62E PartialClosure_PedestrianDetour.pdf

All,
Attached is the parking lot closure map for stadium field work next week scheduled, Monday thru Friday cleared thru parking and IPF.
The parking lot will be cleaned Saturday Nov 3rd, 3am, and reopened as long as things go according to schedule.
If you have questions or concerns we need to discuss let me know.

Ben, let me know what you need for access to the media center next week so we can shift some fencing around to meet your needs those days.

A

From: Wahl, Tressa
Sent: Wednesday, October 24, 2018 3:59 PM
To: Stephanie O'donnell [redacted]
Cc: Fouty, Amy [redacted]
Subject: Emergency field repair at Spartan Stadium - Request partial parking lot 62 E & sidewalk closure

Hi Stephanie,
Per our phone conversation today, please review the attached map showing the partial parking lot 62E & sidewalk closure AND pedestrian detour routes.
Please let me know if this is approved and I will send out a campus wide closure/detour notice.
Thanks,
Tressa

From: Wahl, Tressa
To: Fouty, Amy
Cc: Stephanie O"donnell
Subject: RE: Emergency field repair at Spartan Stadium - Request partial parking lot 62 E & sidewalk closure
Date: Wednesday, October 24, 2018 4:34:21 PM
Attachments: image001.png

Sounds good.

From: Fouty, Amy
Sent: Wednesday, October 24, 2018 4:24 PM
To: Wahl, Tressa [redacted]
Cc: Stephanie O'donnell [redacted]
Subject: RE: Emergency field repair at Spartan Stadium - Request partial parking lot 62 E & sidewalk closure

Monday 6am, Fine by me. I believe the staff and equipment will arrive Monday and I do not have a scheduled time for that yet. As I get more details I will share.
Thanks,
A

From: Wahl, Tressa
Sent: Wednesday, October 24, 2018 4:18 PM
To: Fouty, Amy [redacted]
Cc: Stephanie O'donnell [redacted]
Subject: RE: Emergency field repair at Spartan Stadium - Request partial parking lot 62 E & sidewalk closure

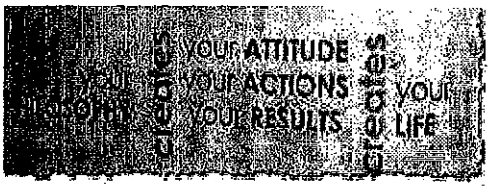
Your welcome Amy.
We need to discuss this with Landscape Services – my guess would be early Monday morning like 6am ish...

From: Fouty, Amy
Sent: Wednesday, October 24, 2018 4:11 PM
To: Wahl, Tressa [redacted]; Stephanie O'donnell [redacted]
Subject: RE: Emergency field repair at Spartan Stadium - Request partial parking lot 62 E & sidewalk closure

Tressa,
Thank you for the quick turn around on this. We will move along as quickly as we can and open sections as they are not needed. Will the barriers/fence be set up Sunday or early Monday am?

Amy J. Fouty, CSFM
Assistant Athletic Director
Michigan State University
223 Kalamazoo Street, RM 228

Jenison Field House
East Lansing, MI 48824-1025
Office- 517-884-6716
Cell- [redacted]
Fax- 517-432-1047
Email- fouty@ath.msu.edu



From: Wahl, Tressa
Sent: Wednesday, October 24, 2018 3:59 PM
To: Stephanie O'donnell [redacted]
Cc: Fouty, Amy [redacted]
Subject: Emergency field repair at Spartan Stadium - Request partial parking lot 62 E & sidewalk closure

Hi Stephanie,
Per our phone conversation today, please review the attached map showing the partial parking lot 62E & sidewalk closure AND pedestrian detour routes.
Please let me know if this is approved and I will send out a campus wide closure/detour notice.
Thanks,
Tressa

From: Fouty, Amy
To: Nogle, Sally
Subject: RE: football game days
Date: Wednesday, October 24, 2018 1:27:00 PM
Attachments: image001.png

See you at your office at 2:45pm.
A

From: Nogle, Sally
Sent: Tuesday, October 23, 2018 7:16 PM
To: Fouty, Amy [redacted]
Subject: RE: football game days

About 2:45pm after our team meeting?

From: Fouty, Amy
Sent: Tuesday, October 23, 2018 5:29 PM
To: Nogle, Sally [redacted]
Subject: Re: football game days

When is a good time to catch you after 1 p.m.?
A

Sent from my Verizon, Samsung Galaxy smartphone

-------- Original message --------
From: "Nogle, Sally" [redacted]
Date: 10/23/18 4:48 PM (GMT-05:00)
To: "Fouty, Amy" [redacted]
Subject: RE: football game days

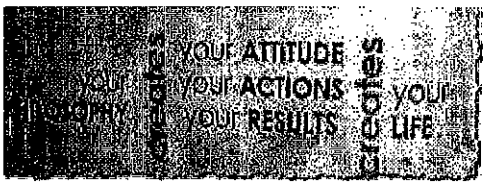
Sounds good.

From: Fouty, Amy
Sent: Tuesday, October 23, 2018 4:37 PM
To: Nogle, Sally [redacted]
Subject: football game days

Sally,
I need to get a few minutes of your time tomorrow to discuss football game day logistics with you regarding athletic training staff.
I have a few concerns from the last few games.
I am sure we can figure them out together with a conversation.

Thanks,
A

Amy J. Fouty, CSFM
Assistant Athletic Director
Michigan State University
223 Kalamazoo Street, RM 228
Jenison Field House
East Lansing, MI 48824-1025
Office- 517-884-6716
Cell-[redacted]
Fax- 517-432-1047
Email-[redacted]



From: Fouty, Amy
To: Georgeanna Heitshusen
Subject: RE: football Oct 27th vs. Purdue
Date: Wednesday, October 24, 2018 1:29:00 PM

You may wear any of the new gear you would like from this year.
No leggings though.
A

From: Georgeanna Heitshusen [redacted]
Sent: Tuesday, October 23, 2018 8:22 PM
To: Fouty, Amy [redacted]
Subject: Re: football Oct 27th vs. Purdue

Got it! Thanks Amy! Will we be wearing the gray sweatshirts, gray tshirts and green hats you gave us last year?

Georgie

On Tue, Oct 23, 2018, 5:03 PM Fouty, Amy [redacted] wrote:

> Good afternoon.
> This is a reminder that you have been scheduled to work at the football game Saturday October 27th, game time noon. I will leave your credential and parking pass, if needed, in your locker before Thursday lunch time.
> Start time Saturday will be 7am, in the staff room . Do not be late.
> I will have lunch tickets for you to be used once the game starts. Bring/wear the appropriate attire for the sidelines- Khaki pants, MSU- t-shirt, hat, and sweatshirt provided for game days. We will have rain gear if needed for you. Wind chill is being predicted in the low 40's at kick be prepared for a cold possibly wet day.
> Your name will be on a list for access into the stadium at gate D which is next to the tower lobby gate on the outer west side.
>
> If you have questions please let me know sooner than later. Please confirm you received this email.
>
> Thanks,
>
> Amy J. Fouty, CSFM
> Assistant Athletic Director
> Michigan State University
> 223 Kalamazoo Street, RM 228
> Jenison Field House
> East Lansing, MI 48824-1025
> Office- 517-884-6716
> Cell-[redacted]
> Fax- 517-432-1047
> Email-[redacted]

the-slight-edge-principles

From: Fouty, Amy
To: Ianni, Gregory
Cc: Atkinson, Rick; [redacted] Lunsford, Bradley; Phlegar, Benjamin [redacted]
Subject: field Reno update 10-24-2018
Date: Wednesday, October 24, 2018 4:39:00 PM
Attachments: image001.png

GI,

As we discussed yesterday, We identified 4 areas to be redone before the OSU game. Our primary concern is to make sure we have a safe playing surface and give our team the best playing surface for the opportunity to win.

Bench areas- 16 wide x 180 ft. long

Midfield (15 to 15 yard line)- 67 feet wide by 180 ft. long

Grass at the tunnel entrance- 30 feet long x 12 ft. wide

This is Roughly 19,000 ft. sq.

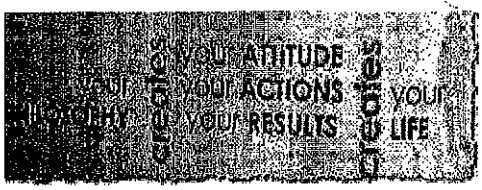
The rolls will be coming from a farm in New Jersey who supplies most of the in season sod for NFL, MLS, and MLB field from Chicago to New York.

The rolls will be 4 ft. wide, roughly 45 feet long and 1.75 inches thick.

Our Friends from Fields, inc. will be in to assist us with the on field processes. Our campus landscape services will be handling off the field needs. Plan to start Monday, remove existing Monday and Tuesday. Prep for sod Wednesday. Lay sod Thursday and Friday.

Say a few prayers for good weather next week, let me know if there are questions or concerns.

Amy J. Fouty, CSFM
Assistant Athletic Director
Michigan State University
223 Kalamazoo Street, RM 228
Jenison Field House
East Lansing, MI 48824-1025
Office- 517-884-6716
Cell- [redacted]
Fax- 517-432-1047
Email [redacted]



From: Brown, Wendy
Subject: Game Day Answers
Date: Wednesday, October 24, 2018 9:42:48 AM
Attachments: Volleyball GAME DAY ANSWERS.pdf
GDA_PURDUE_F05.pdf

Go Green!

Wendy Brown
Associate Athletic Director
Michigan State University
Spartan Ticket Office
1855 Place, Room 1110
550 S. Harrison Road
East Lansing, MI 48823

517.355.1610
www.msuspartans.com
E-mail: [redacted]
Facebook: www.facebook.com/MSUathletics
Twitter: @MSU_Athletics
YouTube: www.youtube.com/msuspartanathletics
Pinterest: www.pinterest.com/msuathletics
Instagram: MSU_SPARTANS

MICHIGAN STATE
VOLLEYBALL

Tobacco Free Campus

GAME DAY ANSWERS

TICKETS:

Public Ticket Sales:

Reserved:

- $10 for all reserved seating.

General Admission

- $8 for adults, $5 for youth or seniors (9yrs -18yrs & 55+) at the door.
- $5 for adults and $3 for youth or seniors (9yrs -18yrs & 55+) in advance.
- $5 for Military rate, *sold only at entrance. One ticket per military ID.*

Group Rates (15 or more people)

- $3 each, ***ADVANCE ORDERS ONLY***

Order online at www.MSUSPARTANS.com, call 517-355-1610 or stop by the Athletic Ticket Office to purchase tickets.

Student Tickets: MSU students are admitted for FREE with their student ID

Faculty/Staff Admission: MSU Faculty/Staff are eligible to purchase GO GREEN cards for $50/each and admission is good for Volleyball, Men's & Women's Soccer, Women's Basketball, Wrestling, Gymnastics, Softball and Baseball. GENERAL ADMISSION SEATING.

Junior Spartans: Free admission for member and two (2) guests. Membership card must be presented at the entrance.

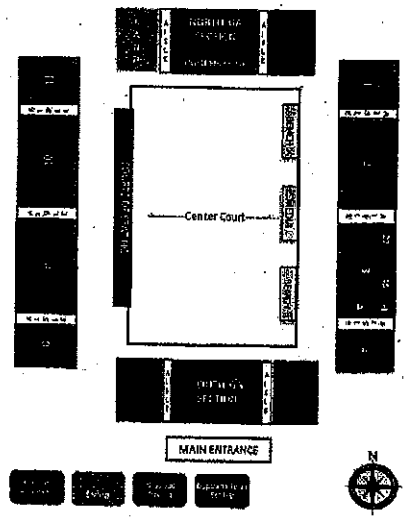
Ages: **CHILDREN 8 AND UNDER ARE ADMITTED FOR FREE.**

WILL CALL INFORMATION:

General Public	Field House entrance	Opens 1 hour and 15 minutes before game
Spartan Players' Guests	Field House entrance	Opens 1 hour and 15 minutes before game
Visiting Team Guests	Field House entrance	Opens 1 hour and 15 minutes before game
Recruits/H. S. Coaches	Field House entrance	Opens 1 hour and 15 minutes before game

TICKET ISSUES: Please visit the Ticket table located at the entrance.

MSU SPARTAN VOLLEYBALL
Jenison Field House Seating Chart



GENERAL INFORMATION:

NO BAGS, NO PURSES or DIAPER BAGS inside of Jenison Fieldhouse

For game times, call 517.432.TIME or 888.GO.STATE or, for general information, 800.GO.STATE (800-467-8283).

GATES OPEN:

All gates open 1 hour and 15 minutes before game

MICHIGAN STATE FOOTBALL

vs. Purdue October 27, 2018 – 12pm

No Re-Entry - Tobacco Free Campus

Tickets

Public Tickets: $50, $80, $100 sales at Gate H on game day.
Student Tickets: $30, $60, $80 with MSU Student ID, reserved seat outside Student Sections with tickets picked up at Will Call at Gate G (after kick-off, if space remains in the student area, tickets can be exchanged at the Student Guest Services – Gate B).
Ages: EVERYONE REGARDLESS OF AGE MUST HAVE A TICKET
Ticket Issues: Guest Services window West side of stadium between Gates G & H
General Ticket Questions: Call 800-GO-STATE (1-800-467-8283), or inquire in person on game day on the west side of Spartan Stadium between gates G and H.

General Information

Game Times: 517-432-TIME 888-GO-STATE (888-467-8283), MSUSpartans.com.
Game Day Traffic: WJIM-AM (1240) WJR-AM (760) WMMQ-FM (94.9).
TV: ESPN
Parking: On campus public parking is available for $20 per game. For more information, contact MSU Police Department at 517-355-8440. Lost or stolen passes will not be replaced. Extending into other parking spaces or lanes of traffic is not permitted. **Cherry Lane Parking area is $30.**
NOTE: *All parking locations will open at* ***7am*** *for this game.*
Shuttle/Bus: Available from Lot 89 at the corner of Mt. Hope Road and Farm Lane. The shuttle starts two hours before the game and returns for a reasonable amount of time after the game. The cost is $5 per game for a round trip ticket or $35 for a season pass. Season passes can be purchased at Lot 89. Parking in this lot is free. Drops off in the SE corner of the stadium.

Gates Open

- Public gates open 1 ½ hours before kickoff –
- Student (gate B) – 1 ½ hours before kickoff –
- Huntington Club & suites (gate E) - 2 hours before kickoff –
- Media gate (gate F) opens –

Charter Bus ($100)/Public RV Parking ($60): Available in lot 97 behind Engineering Research Court, SE of Bogue St and Woodlott Dr (*Not Engineering Building*). There is NO shuttle fee from the charter bus/RV lot.
Persons with Disabilities Parking: Lot 48, behind the Natural Resources building, enter from Trowbridge extension off of Red Cedar or Farm Lane. $20 per game paid upon entering lot then shuttle running to Northeast corner of the stadium. Shuttle runs 2 hours before the game, throughout the game and a reasonable time post-game.
Severe Weather: In case of severe weather, information will be shared with fans over the PA system and on the video boards. In case of evacuation, ushers, police officers and security staff will help direct people to the closest shelter. Sections 1-15 and 105-112 will be directed to Wells Hall, while sections 16-30 and 120-127 will be directed to IM West.
Team Shop: Turf field in IM West across from Ticket Office
Charging Stations for cell phones: Guest Services between gates G & H

Team Walk

Team Phalanx

Hospitality Tents: : Applied Imaging, Radio Affiliates, Office Depot/Max, Schupan, Fox Sports Properties – Red Cedar; Summit Tree Sales, Sparrow Health System – Dem Hall; Dan Henry – West of Urban Planning
Corporate Promotions: General RV, The Mitten State, WJR Tailgate Show – Meijer Fan Fest Opens at 8:30am; IM West – Meijer Family Fun Zone; Surrounding the Stadium – Buick Locations, TIAA Tailgate - Munn

Will Call Information

General Public	West side of stadium – between Gates G & H	Opens 3 hours before game
Press	West side of stadium, Gate F	Opens 3 hours before game
Scouts	West side of stadium, Gate F	Opens 3 hours before game
Spartan Players' Guests	West side of stadium, Gate H	Opens 1 ½ hours before game
Visiting Team Guests	Northwest corner – Brown Plaza, Gate J	Opens 1 ½ hours before game
Football Recruits	**Northeast corner – Brown Plaza, Gate K** **West side of stadium – between Gates G & H**	**Opens 2 hours before game** **Beginning at halftime**
Student Athletes	West side of stadium, Gate D	Opens 1 ½ hours before game
Recruits – not football	West side of stadium, Gate G	Opens 1 ½ hours before game
High School Coaches	East side of stadium, **Gate M**	Opens 1 ½ hours before game

Stadium Regulations and Other Pertinent Information

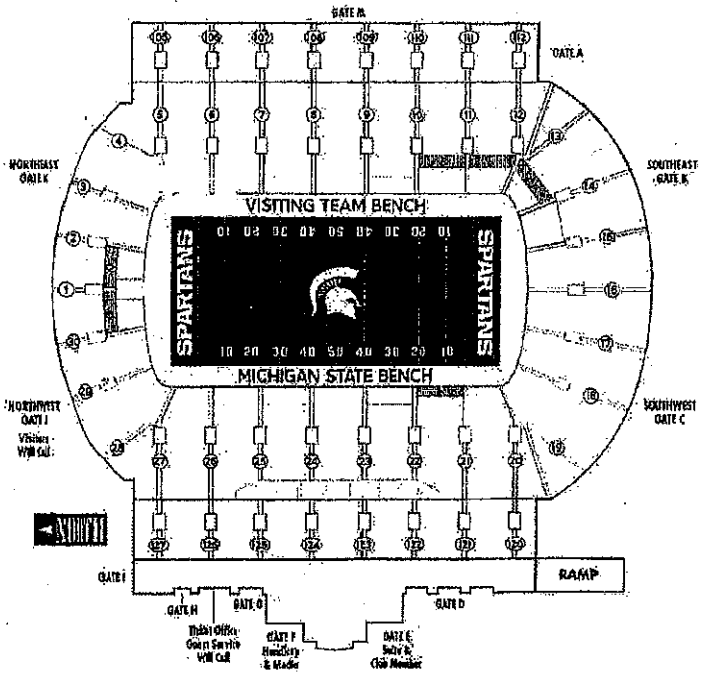
NO BAGS OR PURSES OR DIAPER BAGS
No seatbacks
No containers of any kind
No noisemakers
No smoking/tobacco
No strollers
No food or drink (1 sealed bottle of water per fan; maximum – 20 oz.)
No selfie-sticks or tripods

No alcohol
No cameras or radios larger than 5 ½ x 8 ½ x 2
No cases, video cameras or binocular cases
No flag poles, banners or signs
No umbrellas
No oversized hats
No seat cushions with pouches or pockets
No firearms or other weapons

No Bags or Purses: No provisions for checking and/or holding items deemed inappropriate; restricted items may not be left at or around the gates. Items left unattended will be removed and discarded. No seat cushions with pouches or pockets. Fans with necessary medical items should go to gate C or K to be permitted - **MEDICAL NEEDS** signs will be visible.
No Smoking/Tobacco: MSU is a tobacco free campus and the use of tobacco on MSU property is prohibited.
50-50: 4 kiosks; Concourses - West near section 23, East – near section 8, North near section 1, upper West near section 123 & vendors w/vests. Winners will be announced in the fourth quarter, posted on MSUSpartans.com under FANS and on MSU Athletics Twitter.
ATM: Within stadium gates - lower level: behind section 25; outside stadium gates: SW corner of Spartan Stadium by the track, the library and the International Center.
Concessions: Visa, MasterCard, American Express, Discover, Apple Pay & Samsung Pay accepted at ALL full-service, permanent stands. Spartan Cash accepted in the south east corner near student seating (Sections 10, 11, 12, 13, 112).
Elevators: Gate F - press and elevator passes; Gate E - suite and club tickets; 1-day pass go to Guest Services.
First Aid: East concourse near section 7; West concourse near section 20; Upper West concourse near section 123.
Guest Services: Outside stadium (west) at Gates G & H. Inside stadium at West concourse opposite section 23. Wristbands for parents to write phone numbers and seat locations for children to wear are available at Guest Services.
Information Kiosks: Located at Gates B, C, D, G, J, K.
Lost and Found Items: Gate M – 1 hour after the game contact MSU Police at 517-355-2222.
Persons with Disabilities or Special Needs: Lot 48 (Natural Resources) shuttle bus drops-off & picks up at north end gates. Ramps are ADA compliant and built to the latest code. Family bathrooms are located on the west side, 5th floor & NW concourse.
Police: East concourse, opposite section 9.
Programs: Available for purchase inside and outside Spartan Stadium.
See Something, Say Something: Text MSUPD to 274637 with message
Spartan Seatbacks: Outside section 22 or call 877.610.4154 ***before*** game day. No single game rentals.
Ushers: Available at the entrance to each section.
Varsity S Club Room: Across from Section 25 at ground-level.
Water Fountains: West concourse across from the entrances to sections 23 & 24 in the lower level, South concourse restrooms
Workers: Gate M

Student Sections – Sections 9-15, 110-112 **Visitors** – 4, 5, 6 & 105, 106, 127 **Locker Rooms** – North Endzone Building

SPARTAN STADIUM SEAT MAP



If you are in Section	Then use Gate
1-9	K
105-109	K
10-14, 110-112	A
15-16	B
17-20	C
21-23, 120-127	D
24-30	J
125-127	I
24-25	J or D
Suites & Spartan Club	E
Press Credentials	F

From: Frank, Kevin
To: Eric Davey
Cc: Mitchelson Carey; Fouty, Amy; Boak Curt; Dan Lucas; Doug Johanningsmeier
Subject: Re: MTF CONFERENCE GUIDE
Date: Monday, October 22, 2018 10:06:45 AM
Attachments: Mich Turf Conference Program Draft KWF Edits.pdf

I've attached an edited version of the guide - you'll notice that the edits I made show up in different font than what they used as the font they used is not available when you edit the document via Adobe.

Overall, it's in pretty good shape. I didn't try to change the pictures that were in the wrong spot for the board candidates.

Thanks

Kevin

On Oct 22, 2018, at 6:49 AM, Eric Davey <[redacted]> wrote:

Please find conference guide review 1. below please reply with corrections as needed. Quick note things I have noticed so far is candidates page photos are mixed up.

ERIC

Begin forwarded message:

From: Dave Lee <dlee@brdprinting.com>
Subject: RE: MTF CONFERENCE GUIDE
Date: October 19, 2018 at 4:58:47 PM EDT
To: Eric Davey <[redacted]>

First draft attached. Dani mentioned that more content must be to come?
Please review and reply with approval, or note any changes you would like.

<image005.jpg>

BRD is now a G7 Master Colorspace Printer!

The only general commercial printing company in mid-Michigan with G7 Master Colorspace certification!

Check out our updated website brdprinting.com

<image006.jpg>

Dave Lee
President
BRD Printing Incorporated
912 W Saint Joseph
Lansing, MI 48915
p. 517.908.4298
f. 517.372.4922
c. [redacted]
e. dlee@brdprinting.com
w. www.brdprinting.com

Breathtaking Quality
Responsive Service
Dependable Delivery

BRD Printing Incorporated, it's all in the name!

From: Eric Davey [mailto:[redacted]]
Sent: Friday, October 19, 2018 11:03 AM
To: Dave Lee
Subject: Re: MTF CONFERENCE GUIDE

Dave,

Thanks for the update. Just send over for review when ready. Once again thank you very much for your help

Eric

On Oct 17, 2018, at 6:57 AM, Eric Davey [redacted] wrote:

Dave

Thanks for update just when you get proof send over and I will distribute to guys to look over appreciate all your help and cooperation

Eric

Sent from my iPhone

On Oct 17, 2018, at 6:54 AM, Dave Lee <dlee@brdprinting.com> wrote:

Wanted to update you on status. I would expect a proof for you late this week. Not to worry about getting inserted into MiGCSA Course Conditions. At this point we have very

little content from Adam. I know he tells people to get him ads by 10/15, that is to make sure there are no delays. In your case since we are designing both we have control to make sure they get done together.

BRD is now a G7 Master Colorspace Printer!
The only general commercial printing company in mid-Michigan with G7 Master Colorspace certification!

Check out our updated website brdprinting.com

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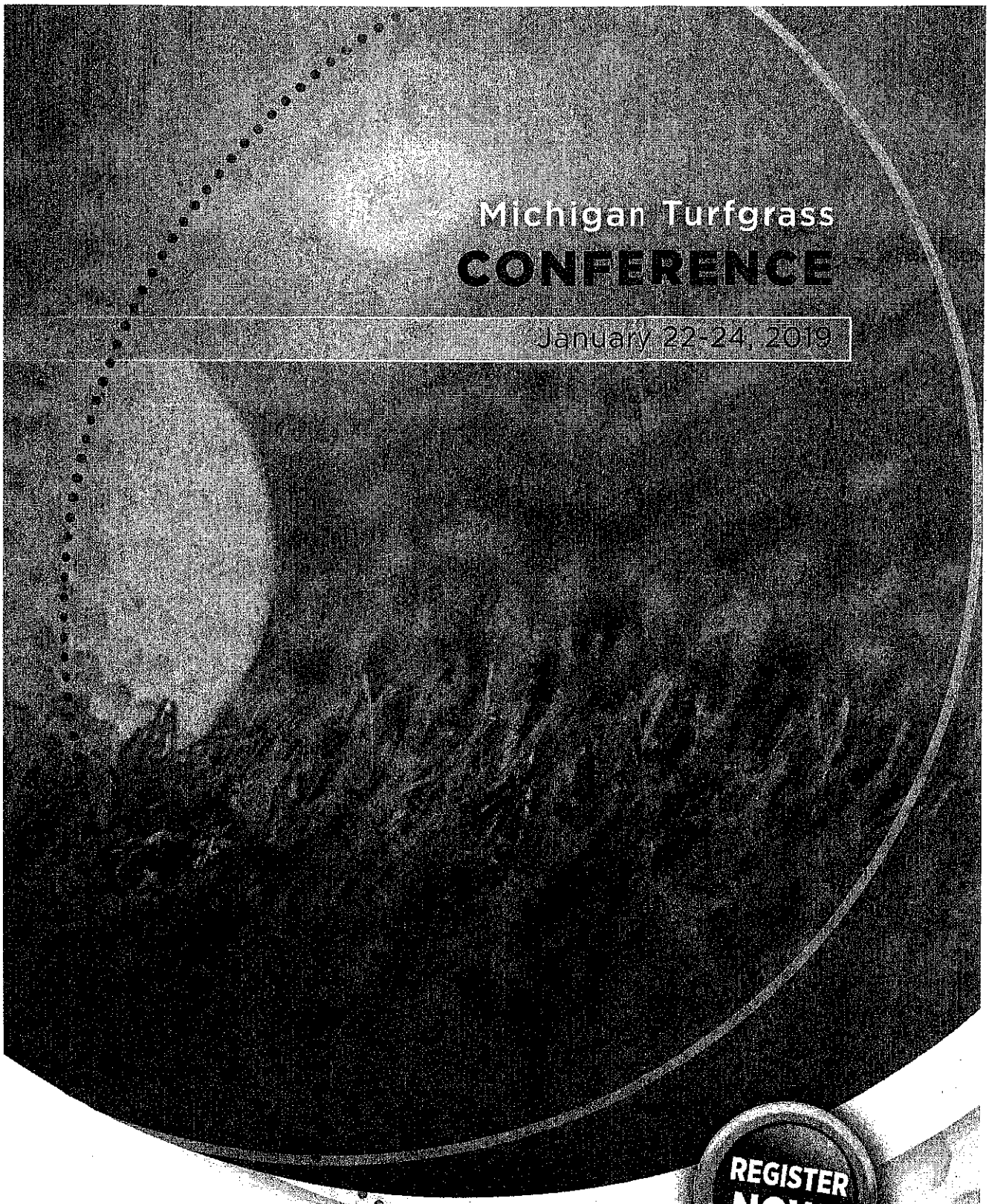


Michigan Turfgrass CONFERENCE

January 22-24, 2019

REGISTER NOW!

MICHIGAN TURFGRASS FOUNDATION

MTF

Education • Research • Extension

FOUNDED 1957

Kellogg Hotel & Conference Center

EAST LANSING, MICHIGAN

TO REGISTER: www.michiganturfgrass.org

Why Support the Michigan Turfgrass Foundation?

Not to be confused with trade organizations, membership in the MTF is direct support for research at the Turfgrass Research Program at MSU.

The MTF Mission Statement:
"To work in partnership with Michigan State University, supporting ongoing programs in research, education and extension in the area of professional turfgrass management that will benefit all individuals who manage turfgrass or derive pleasure from the results of such management."

Your membership dues fund a significant portion of the research that the MSU Turf Team conducts each year as well as offsetting the fixed costs of operating the Foundation. In the last ten years the Foundation has contributed over $ 1,200,000.00 to support the improvement of and management of turf through MSU.

Thank you for supporting Turfgrass Research and continuing research education at MSU.

Sincerely,

MTF Board of Directors

TABLE OF CONTENTS

PRESIDENT'S MESSAGE

This year has been filled with incredible challenges, opportunities, and success. I am sure many of you, like myself, are looking forward to a long winter and some needed down time to recharge the batteries. The summer of 2018 provided challenging weather to contend with and a variety of turfgrass diseases, as well as insect and maintenance concerns that often required out of the ordinary solutions.

I am appreciative of the efforts of our Turf Team who provided important information to assist people, hit the road to do site visits and leant a shoulder to lean on when all else seemed to fail. I had many positive comments regarding the support the MSU Turf Team was able to provide and extend a thank you to all the Professors and all their hard work.

I am very grateful this year to have been one of many leaders on this Board working diligently on a variety of different activities for the Michigan Turfgrass Foundation. I appreciate how engaged each of the members on the Board of Directors have been with their designated committees and all their efforts this year. All MTF members should value the time each Board Member volunteers on efforts to support research at MSU.

The sole responsibility of the MTF is to fund research at Michigan State University. Many of our activities allow our membership to interact with the MTF to attain fundraising goals and network with Michigan State University. Some highlights are listed below.

Events

Tee Times 4Turf (our on-line Golf Fundraiser), **The Lafontaine Golf Outing** and **Field Day** were all well received with higher participation rates in 2018. All the funds raised thru these events go towards research support, improving resources for the turfgrass community in Michigan, and keeping the Foundation functional.

Committee work

The Research Committee has been involved in several initiatives this year from the events side to reviewing research funding guidelines and reaching out to the industry to see what research the turf community is interested in having funded. Thank you to Dan Mausolf and Jeff Holmes for leading the way. We anticipate that the 2019 research committee will play a vital role for the MTF and will be instrumental for future Boards.

Endowments

The entire board is working on creating a new fund to help support the Turf Team and their requirements for Graduate Students. The goal to annually fund these Graduate Students is being processed and our objective is to have details for this fund available during the 2019 Conference. The Turf Team Professors have long identified that funding Graduate Students would be the best way to support turf research and the Board of Directors are supportive of this initiative and will see it to fruition.

Overall

Our thoughts now turn to January and the **89th MTF Conference**. Each year the conference committee reviews suggests for topics and speakers to bring the highest quality of education and resources to Michigan's Turfgrass community. After reviewing the line up, I think they have once again hit it out of the ball park.

Thank you, Curt Boak, conference committee chair and Dr. Kevin Frank for all their hard work organizing the 2019 conference. It can be a daunting, thankless job with more details than most will ever know. To all our attendees, please take a moment to thank these two gentlemen for their efforts and hard work!!!

Look forward to seeing you all there. Have a safe and enjoyable Holiday season!!

Amy J. Fouty, CSFM
President
Michigan Turfgrass Foundation

Welcome to the 2019 Michigan Turfgrass Foundation Conference Guide

This year marks the 89th time that the MTF has hosted our Annual Conference. That alone is a remarkable story... and may have many of you reaching for your old photos and course logs debating how time passes. The Michigan Turfgrass Foundation is proud of the work it puts in every year to provide interesting seminars, knowledgeable speakers and various social options to keep everyone's interest.

The State of Michigan is fortunate to have many robust organizations involved in the Green Industry... all lending support to their individual memberships. Most of these organizations depend upon volunteer Boards and Committees for their existence and most of these volunteers are never properly recognized for the efforts they take on. Without these organizations, the interaction among companies, employees, regulators, manufactures...the list is endless...would suffer enormously. The Green Industry is a common link that much of the public is keenly aware of. Lawns, Golf Courses, Parks, Farms, Industrial Sites, Government Land, road sides...everywhere you look there are examples of the Green Industry and its impact on every day surroundings.

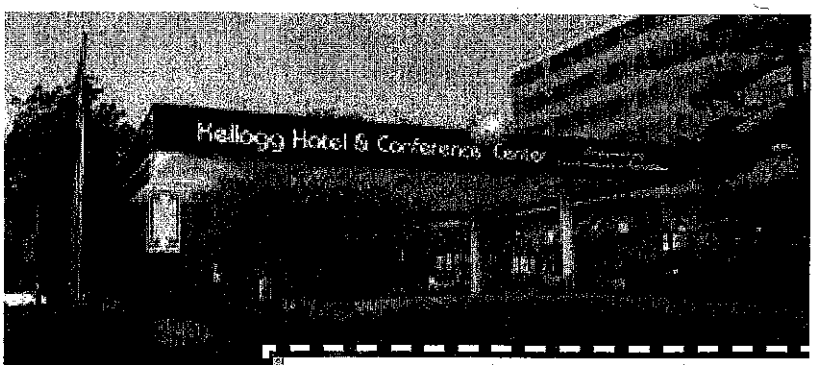
As such a visible commodity, it can also be easily scrutinized. One of the best tools to provide to those with questions is proper information and a keen knowledge of your profession. The Annual Turfgrass Conference which the MTF hosts can be a fundamental way to keep updated on key issues and questions that the public and our customers often ask. We hope you take advantage of all the information available to you during the conference and feel free to offer input on items that may make future conference's even more productive.

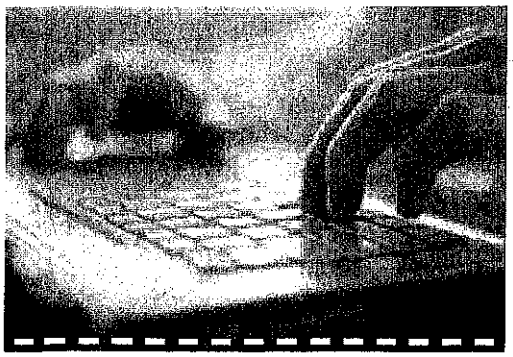
Overall, the Michigan Turfgrass Foundation continues to keep on track with its mission to support Turf Research. Our Membership has grown this year, partially due to the implementation of our membership software (Wild Apricot) partially due to a great deal of work on reconnecting with members who have not been updated. Our 4 specific Fundraising events (TT4Turf, LaFontaine Golf Outing, MSU Field Day and the Annual Conference) provided upticks financially. The hard work of each of the Committee Chairs cannot be overstated and it is only because of their efforts that we continue to show increases in our ability to fund the Turf Team. Our connection to MSU also extends to the Turf Students. We will be awarding 4 Scholarships to individuals during the Conference and congratulate them as well as all the students seeking a career in turf.

The Board of Directors have engaged a long-range plan of providing more research funding to the Professors. Each of our Turf Team Professors have expressed that the fundamental key to research is the ability to fund Graduate Assistantships. These Assistantships are the financial responsibility of each Professor (they are not provided by the University) and funding these positions can be daunting. Our decision to move the Rieke Endowment (for Graduate Students) to MSU will soon be enhanced with funding by the MTF. Increasing costs of GA have dictated that the MTF would be best served by allotting funds to help supplement the Rieke Endowment. The Board of Directors and the Research Committee will also be responsible for engaging with the Turf Team suggestions related to the research and the chosen individuals. Input by our membership for topics of research is vital and the MTF Research Committee will be responsible for gathering suggestions.

Finally, many thanks to all those who will participate as sponsors to our event. your support is greatly appreciated, thanks to the MiGCSA for allowing us to include our updates and this guide in their publication and to all the volunteers who make our event so successful.

Carey Mitchelson
Executive Director
Michigan Turfgrass Foundation





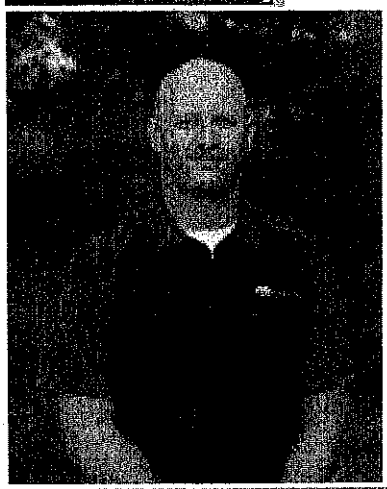
Welcome to the 89th Annual Michigan Turfgrass Foundation's Annual Conference

We are bringing together 3 full days of education in the fields of golf, athletic fields and lawn care industries. Kevin Frank has put together another great line up of speakers. This conference wouldn't be what it is today without his help. Thanks Kevin! Check out all of his hard work in the conference schedule. Online registration is now open!

The conference also provides some great social gatherings to network with industry experts in your specific field of expertise. Tuesday brings the annual meetings of MiGCSA and MTF at 4:30pm. Wednesday offers the past president luncheon and the ever so popular Vendor Halftime Show with the Dr. Paul Rieke Silent Auction from 4:00 pm to 6:00 pm. All income from the silent auction is donated to the Paul Rieke Endowment. If you would like to donate an item contact Mark Wildeman. Mark's contact info and more info on the silent auction is on page 20. This is a great event to mingle with old and new friends and enjoy some great food and drink. Also providing a great opportunity to reach out to a wide selection of vendors in the turfgrass field. If you would like to be a vendor registration is open.

Yapp

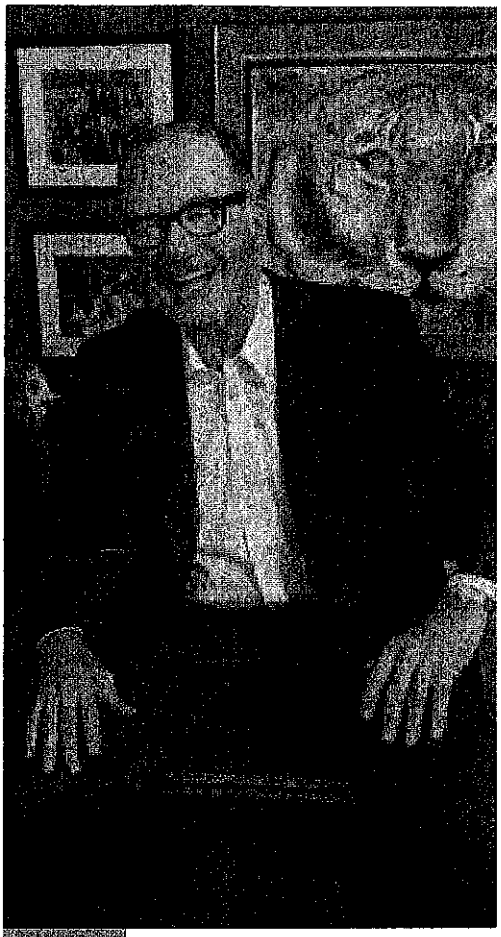
Conference also provides a great time to take care of any MTF housekeeping items you may need to do. You can take care of membership dues, sign up to donate for Tee Times 4 Turf, and if you have any questions about the MTF, board members will be there to answer them. Membership dues can be taken care of at the registration table and also the Tee Times 4 Turf committee will have a table set up at registration to sign up.



Finally, I would like to thank the 2019 conference committee of Dan Mausolf, Mark Wildeman, and Scott Rettmann for your hard work in putting together this conference.

Curt Boak

Conference Chair



KEYNOTE PRESENTATION:

Creating and Leading a High Octane, High Productivity, "On a Mission from God" High Performance Team

Management is getting work done through others---the employee team. It goes without saying that the first responsibility of every leader is creating, developing, leading and SUSTAINING a high performance team. This keynote presentation will address the "barbell theory of leadership" used by The Activist Supervisor / Department Manager; will review the Human Resource Cycle and tactics applicable to each part of "the employee journey"; will identify tactics for motivating team members to perform at a higher level; and will provide practices for creating "tribe" and delivering "The Buzz" to every member of the employee team.

GREGG PATTERSON / Tribal Magic!!!

Gregg Patterson became the General Manager of The Beach Club in 1982 and spent 34 glorious years as their GM, stepping aside for the "next generation" and his next adventure as a full time speaker and writer with his new company "Tribal Magic!!!" in 2016.

Gregg has been a featured presenter at various club management seminars, assistant manager conferences and hospitality forums around the world; teaches club management courses at BMI-II and BMI-V; was an Adjunct Professor in the Collins School of Hospitality Management at Cal Poly University, Pomona for fourteen years; and is a visiting lecturer at various universities both in the states and around the world.

Gregg also writes for *Board Room* magazine, *Club Management* magazine, *Club Management*

Perspectives, Golf Retailing magazine and *The St. Andrews Management Center* and is the author of *Reflections on the Club Experience*, an anthology of essays on club cultures and operations. In acknowledgement of his efforts as an educator in both the university and the corporate worlds, he was awarded the 2002 *Gary Player Private Club Educator of the Year Award* by Board Room magazine, the *Club Executive of the Year* by the Club Management Association of America in 2015, the *Lifetime Achievement Award* by the Asian Pacific Hospitality Summit in 2015 and the 2015 Board Room magazine *Award of Dedication* "for his timeless, energetic and dedicated service to the private club industry."

CONFERENCE SCHEDULE

GOLF SESSION (Big Ten A)

» **9:00 AM**

Creating and Leading a High Octane, High Productivity, "On a Mission from God" High Performance Team –
Gregg Patterson, Founder and President, Tribal Magic

» **10:45 AM**

Turfgrass Pathology Research Update –
Dr. Joe Vargas, Jr., MSU

» **11:30 AM**

Putting Green Management Research Update –
Dr. Trey Rogers

LUNCH 12:00 PM

» **1:30 PM**

The Big Time-Long Time Staff Happy Toolbox – Gregg Patterson, Founder and President, Tribal Magic

» **2:30 PM**

Implementing the Smith-Kerns Dollar Spot Model at your facility –
Dr. Paul Koch, Univ. Wisconsin

» **3:30 PM**

Michigan Pesticide Regulatory Update –
Molly Mott, Pesticide Enforcement Specialist, MDARD

» **4:30 PM** Annual Meetings MiGCSA, MTF, MiSTMA

TUESDAY, January 22

LAWNS, ATHLETIC FIELDS, AND GROUNDS SESSION (Lincoln)

» **9:00 AM** - Big Ten A

Creating and Leading a High Octane, High Productivity, "On a Mission from God" High Performance Team – Greg Patterson, Founder and President, Tribal Magic

» **10:45 AM** - Lincoln Room

Weed Control Update – Aaron Hathaway, MSU

LUNCH 12:00 PM

» **1:30 PM**

What We've Learned from Stadium Turf Establishment Projects – Dr. Trey Rogers, MSU

» **2:30 PM**

2018 Year in Review and Tips for Improving Turf in 2019 – Dr. Kevin Frank, MSU

» **3:30 PM**

Turf Insects in Michigan Lawns – David Smitley, MSU

» **4:30 PM** Annual Meetings MiGCSA, MTF, MiSTMA

EQUIPMENT TECHNICIANS SESSION (Hancock Turfgrass Research Center)

» **8:00 AM**

Registration/Donuts Refreshments

» **8:30 – 10:30 AM**

Schaffer oil and lubricants, grease and fuel additives

» **10:45 AM – 12:00 PM**

Jacobsen

LUNCH 12:00 PM

» **1:00 – 3:00 PM**

Bill Stone John Deere JW Turf

CONFERENCE SCHEDULE

GOLF SESSION (Big Ten A)

» **8:00 AM**
Grad Student Research Presentations –
Ryan Bearss, Thomas Green, Anna Stouffer-Hopkins, and Mick Piombino

» **9:00 AM**
Turfgrass Nutrition, Nutrient Fate, and Cultivar Evaluation Research Update –
Dr. Kevin Frank, MSU

» **9:30 AM**
Physiology Research Update –
Dr. Emily Merewitz, MSU

» **10:00 AM**
Snow Mold Control: What works and why the heck didn't it work at my place –
Dr. Paul Koch, Univ. Wisconsin

LUNCH 11:00 AM

GOLF SESSION (Auditorium)

» **12:30 PM**
Golf as Natural Capital –
Dr. Brian Horgan, Univ. Minnesota

» **1:30 PM**
The Story of Erin Hills –
Mike Hurdzan, Hurdzan Golf

» **2:30 PM**
Growing Turf in Low Light, Shaded Environments – Dr. Aaron Patton

» **3:30 PM**
Scholarship Awards

» **4:00 PM**
Vendor Half-Time Show

ASSISTANT GOLF COURSE SUPERINTENDENTS SESSION (103 AB)

» **12:30 PM**
Title TBD – Bob Vavrek, USGA

» **1:30 PM**
Transitioning from Asst. to Superintendent –
Mike Montney, Western Golf and CC and Brian Hilfinger, Edgewood CC

South 9 renovation at Cascade Hills CC –
Orville Davis, Cascade Hills CC

» **2:30 PM**
GCSAA Assistant Certification and EXCEL Leadership Programs –
Steve Randall, GCSAA

» **3:30 PM**
Scholarship Awards

» **4:00 PM**
Vendor Half-Time Show

WEDNESDAY, January 23

LAWNS, ATHLETIC FIELDS, AND GROUNDS SESSION (Lincoln)

» **8:00 AM**
CSI Turfgrass: Identification and management of the most common lawn/sports diseases, insects, and abiotic problems – Dr. Paul Koch, Univ. Wisconsin

» **9:00 AM**
Sustainable Turfgrass Systems – Dr. Brian Horgan, Univ. Minnesota

» **10:00 AM**
MSU Weed Diagnostics – Erin Hill, MSU Diagnostic Services

LUNCH 11:00 AM

» **12:30 PM**
How you can make your herbicide work better – Dr. Aaron Patton, Purdue University

» **1:30 PM**
Identifying Diseases in Lawns and Sports Turf – Nancy Dykema, MSU

» **2:30 PM**
Biting Stinging Insects – Howard Russell MSU Diagnostic Services

» **3:30 PM**
Scholarship Awards

» **4:00 PM**
Vendor Half-Time Show

EQUIPMENT TECHNICIANS SESSION (Hancock Turfgrass Research Center)

» **8:00 AM**
Registration/Donuts Refreshments

» **8:30 AM**
Foley presentation Reel Science

» **10:30 AM**
Break

» **10:45 AM**
EZGO Fuel injection and Lithium Technology

LUNCH 12:00 PM

» **1:00 PM**
John Garletts and Tom Burck from Spartan Dist.

» **3:00 PM**
Hydraulics

CONFERENCE

SCHEDULE

GOLF SESSION (Big Ten A)

» **8:00 AM**
Understanding PGR Application Timings – Aaron Hathaway, MSU

» **8:30 AM**
50th Anniversary of the O.J. Noer Turf Collection at MSU – Pete Cookingham, MSU Libraries

» **9:00 AM**
USGA Regional Update – Bob Vavrek, USGA

» **10:00 AM**
Golf and the Law – Mike Hurdzan, Hurdzan Golf

» **11:00 AM**
Golf Course Research Update – Dr. Thom Nikolai

LUNCH 12:00 PM

INNOVATIVE GOLF COURSE SUPERINTENDENTS SESSION (Big Ten A)

» **1:30 PM**
Railside Golf Club Master Plan Renovation – Jeff Smith, Railside Golf Club

» **2:00 PM**
College Fields In-House Construction Projects – Greg Bishop, College Fields GC

» **2:30 PM**
Restoration at Inverness Club – Ryan Kaczor, Inverness Club

» **3:00 PM**
Benefits of Forward Tees on Golf Courses – Chris Wilczynski, CW Golf Architecture

» **3:30 PM**
The First Green and GCSAA Programs Update – Colin Seaberg, Barton Hills CC

» **4:00 PM**
Renovations at Cascade Hills CC – John Fulling, Kalamazoo CC

THURSAY, January 24

ATHLETIC FIELDS SESSION (103 AB)

» **8:00 AM** - Big Ten B
Calibrating Sprayers and Spreaders on New Ride On Sprayers/Spreaders –
Dr. Aaron Patton, Purdue University

» **10:00 AM** - 103 AB
Soil Drainage and the Sand Cap-Build Up System –
Dr. Jim Crum, MSU

» **11:00 AM**
Field of the Year Presentation –
MISTMA

LUNCH 12:00 PM

» **1:30 PM**
Dianosing Athletic Field Problems – Dr. Ben Hamza, TruGreen

» **2:30 PM**
Turf Nutrition and Fertilizer Programs for Athletic Fields –
Dr. Kevin Frank, MSU

» **3:30 PM**
Robotic painting techniques for athletic fields –
Josh Dukes, Turf Tank Intelligent Marking

LAWN CARE SESSION (104 AB)

» **8:00 AM** - Big Ten B
Calibrating Sprayers and Spreaders on New Ride On Sprayers/Spreaders –
Dr. Aaron Patton, Purdue University

» **10:00 AM** - 104 AB
Don't Let This Happen to You –
Dr. Ben Hamza, TruGreen

» **11:00 AM**
Abiotic Plant Problems and Solutions –
Dr. Bob Schutzki, MSU

LUNCH 12:00 PM

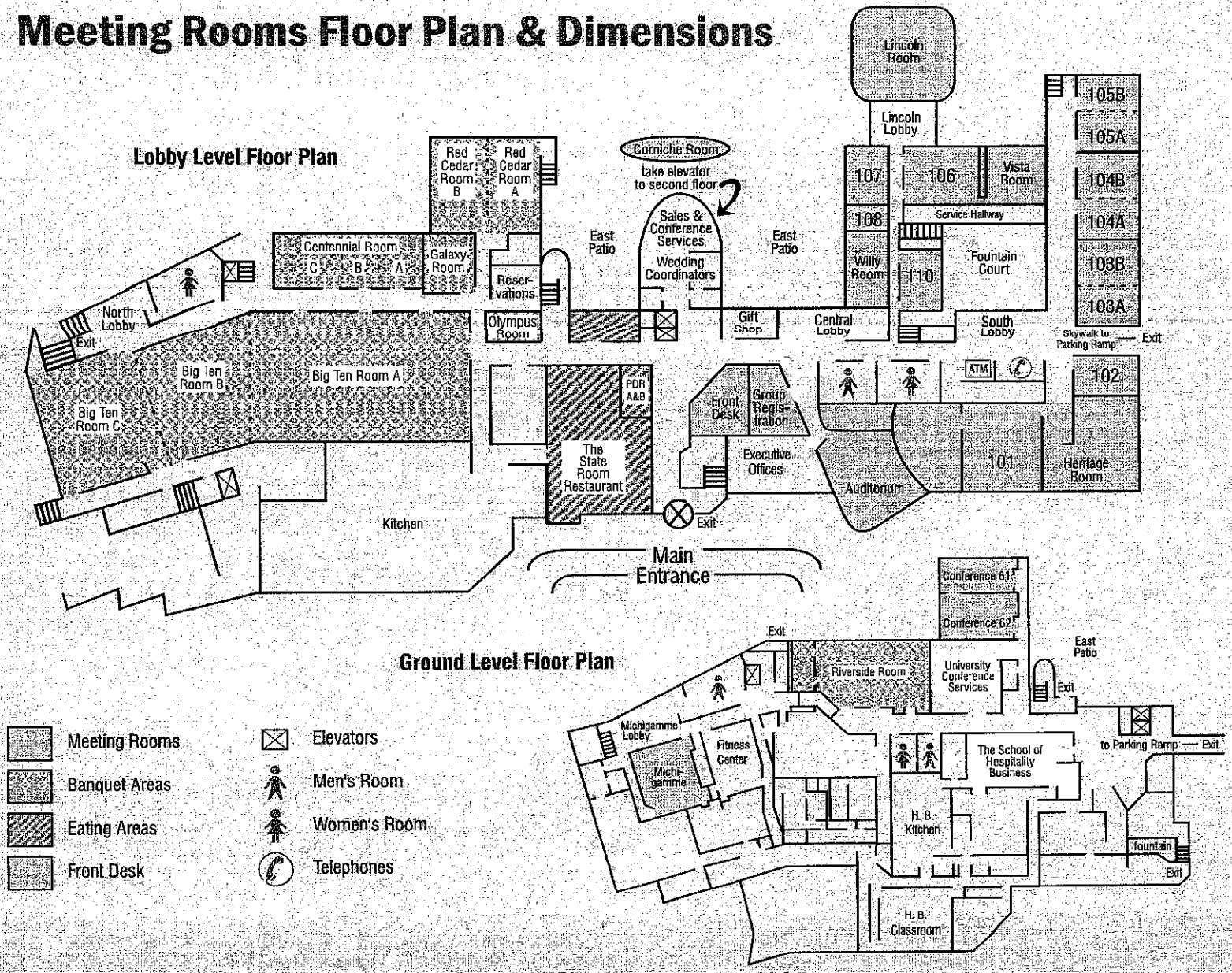
» **1:30 PM**
Lawncare success and failures –
Dr. Thom Nikolai, MSU

» **2:30 PM**
Trees and Turf: Can't We All Just Get Along –
Dr. Berg Cregg, MSU

» **3:30 PM**
Ornamental and Landscape Disease Diagnostics –
Dr. Jan Byrne, MSU

» **4:30 PM** Adjourn

Meeting Rooms Floor Plan & Dimensions



What You Need to KNOW

Conference Hotel:

Kellogg Hotel & Conference Center
219 S. Harrison Rd, East Lansing, MI 48824
Phone: 517-432-4000
Website: Kelloggcenter.com

Please Contact the Kellogg Hotel & Conference Center for Hotel Reservations

Phone: 800-875-5090
Group Code: **1901MITURF**
Group Rate: $115.00 per night. Exp. 12/18/18

ATTIRE: Business Casual (slacks and a collared shirt for men and comparable for women) is the preferred conference attire. Jeans, t-shirts, and ball caps are discouraged.

DINING: On your own

MDARD PESTICIDE RECERTIFICATION CREDITS -

Wednesday, Jan. 22	—	TBD Credits
Thursday, Jan. 23	—	TBD Credits
Friday, Jan. 24	—	TBD Credits

GCSAA EDUCATION POINTS - TBD

STMA CEUS - TBD

INDIANA CCHS - TBD

ON-SITE REGISTRATION HOURS:

Wednesday	8 am-noon
Thursday	8 am-noon
Friday	8am-10am

VENDOR

HALFTIME SHOW & SILENT AUCTION

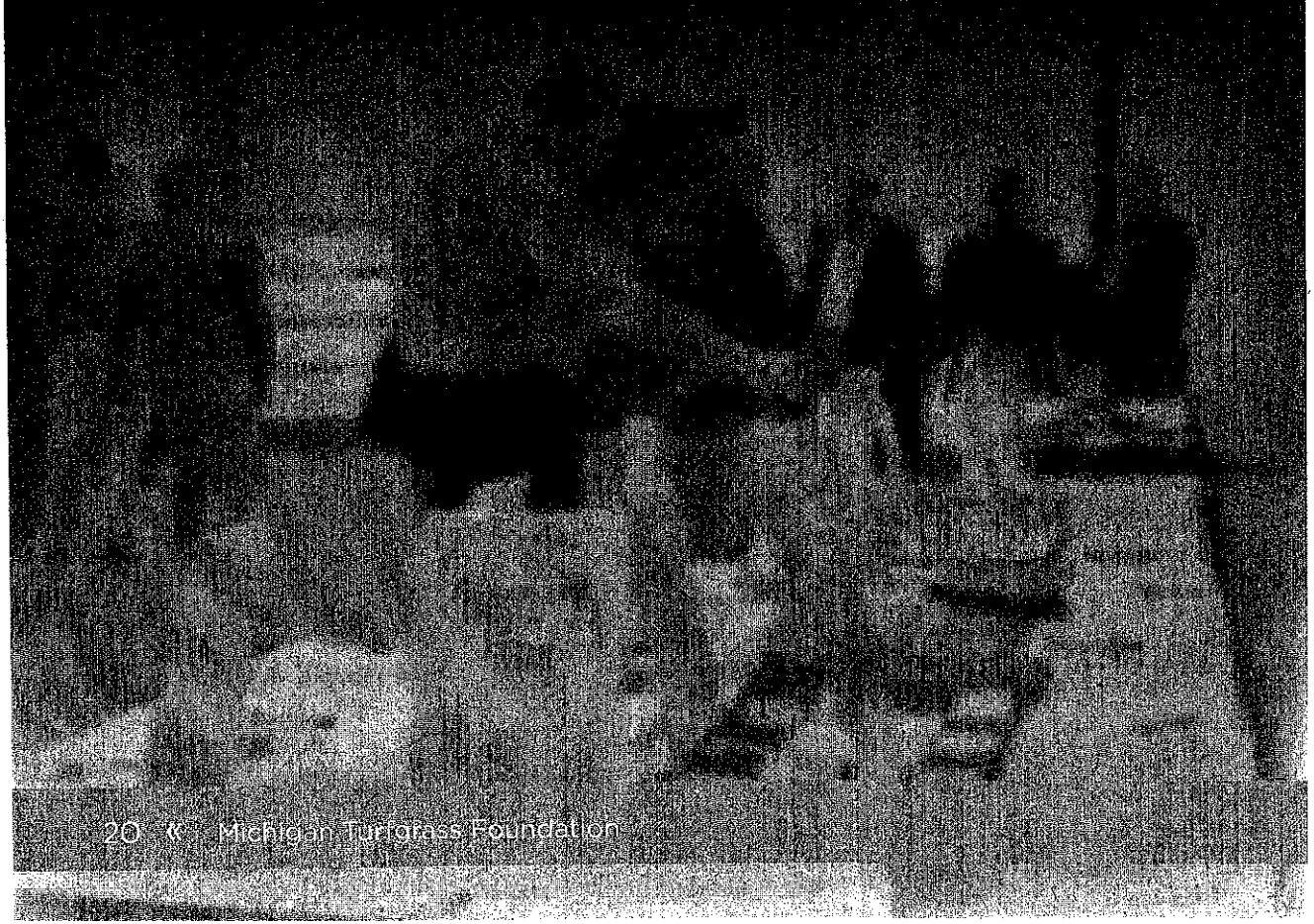
January 23, 2019
4:00 pm to 6:00 pm

To support the Dr. Paul Rieke Endowment Fund, the Silent Auction will be held during the vender halftime show at the Michigan Turfgrass Conference. We are looking for donations for the auction. These donations can reflect your business or be a non-related item as a "Good Will" donation. Your name and company logo will be displayed with your donated item.

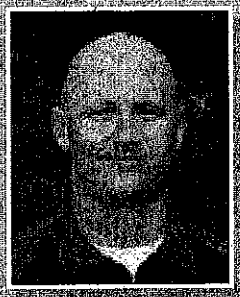
The Dr. Paul Rieke Endowment Fund was created in 1999 at Paul's retirement from active teaching to honor Paul and preserve the integrity that he instilled into his teaching, research, and extension activities, and to promote turfgrass science. At that time Dr. Paul Rieke helped determine how the fund would be used and his wishes are to support an ongoing turfgrass graduate student position at MSU. Last year we raised $6,500.00.

If you would like to donate an item or service email me and I will provide you the paperwork to donate your item and answer any questions you may have. Thank you in advance for supporting the MSU turfgrass program and the Dr. Paul Rieke Turfgrass Endowment Fund.

Mark Wildeman
mwildeman258@gmail.com



Candidates for **ELECTION** to the 2019 Board of Directors



CURT BOAK, Lawn Tech

I have been working in the landscape/lawncare industry for over 20 years in the commercial and residential industry. I enjoy everything that makes a lawn care company great from running the day to day operations to completing the field work. I have been an MTF board member for the last 3 years. Being involved with the MTF board is a very rewarding and unique experience. I have learned so much and look forward to learning more.

ERIC DAVEY

I have worked within the golf industry for the last 23 years. This work experience has brought me great opportunities to work with great people and see amazing things. As a current Michigan Turfgrass Foundation board member, I feel it is important for me to give back some of the great experiences I have had in this industry. To help ensure we, as members of the Michigan Turfgrass Foundation, continue to support Michigan State University and its turfgrass program.

DAN JENNINGS, Diamond Pro

I began my first seven years as a professional groundskeeper in the baseball industry. I have worked as an assistant in the major leagues for the Texas Rangers, also the head groundskeeper with the Great Lakes Loons and Dayton Dragons. I've spent the last five years as a national sales representative and consultant for Diamond Pro, in that period I worked with professional teams and many national boards and committees. I'm currently on the National Sports Turf Managers Association finance and audit committee. I've sat on the board with Ohio Sports Turf Managers Association and also the Indiana Sports Turf Managers Association. I hold a Sports & Commercial Turfgrass certificate from Michigan State University. I would enjoy the opportunity to bring my experience and knowledge to the Michigan Turfgrass Foundation board.

CRAIG MOORE, Marquette Golf Club

I am the Grounds Superintendent at the Marquette Golf Club. My staff and I take care of 36 holes (Greywalls & Heritage) for our members and guests to enjoy. I have been working in the golf industry for 26 years holding positions at Flushing Valley GCC (Superintendent), Kingsley Club (Construction and Maintenance), Oakland Hills (Internship), Mistwood (Construction and Maintenance), Heather Highlands (Proshop). I have a Bachelor of Science Degree in Crop and Soil Science from Michigan State University plus an Associate of Applied Science degree in Turfgrass Management and a Sports and Commercial Turf Certificate from Northwestern Community College and MSU extension in Traverse City.

I am very interested in lowest input management and low environmental impact management by turf professionals. I am also very engaged in snowmold research on our property; Dr. Paul Koch from UW uses our facility as his northern test site and I test different products and rates every year looking for effective yet economical control options.

I enjoy golf history/architecture, turf research, cooking and most importantly time spent with my wife and 3 young boys on the golf course, in hockey rinks and hiking our amazing state.

MICHIGAN TURFGRASS FOUNDATION

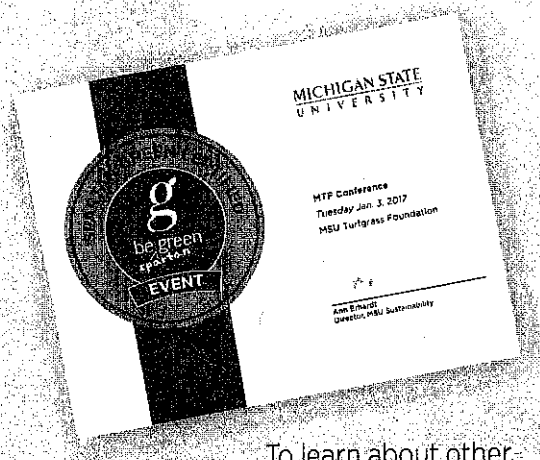
MTF

EXECUTIVE COMMITTEE

PRESIDENT
Amy Fouty, Michigan State University
2019 Representing: Sports or Institutional Turf

VICE PRESIDENT/TREASURER
Doug Johanningsmeier, Harrell's LLC
2020 Representing: Commercial Turfgrass

SECRETARY
Dan Mausolf, Stine Turf and Snow
2020 Representing: Lawn Maintenance



To learn about other sustainable events on campus you can visit our website:
http://bespartangreen.msu.edu

BOARD OF DIRECTORS

Terms Expire 2019

Amy Fouty, Michigan State University
2019 Representing: Sports or Institutional Turf

Curt Boak, Lawn Tech (Incumbent)
2019 Representing: Lawn Applicator

Eric Davey, Prestwick Village Golf Club
2019 Representing: At Large

Mark Wildeman, Clio Country Club
2019 Representing: At Large

Terms Expire 2020

Doug Johanningsmeier, Harrell's LLC
2020 Representing: Commercial Turfgrass

Matt Gaver, Spring Lake Country Club
2018 Representing: Western Michigan District

Brad Lazroff, Huron Meadows Golf Course
2018 Representing: At-Large

Dan Mausolf, Stine Turf and Snow
2018 Representing: Lawn Maintenance

Terms Expire 2021

Rob Pylar, Bayer
Representing: At-Large

Dan Lucas, Kingsley Club
Representing: Northern Michigan District

Jeff Holmes, Egypt Valley Country Club
Representing: Western Michigan District

Scott Rettmann, Walnut Creek Country Club
Representing: Mid-Michigan District

STAFF

EXECUTIVE DIRECTOR
Gordon LaFontaine

MSU TURF TEAM / SUPPORT STAFF

PLANT, SOIL AND MICROBIAL SCIENCES

Dr. James Crum, Soils
Phone: 517-353-0134
Email: [redacted]

Dr. Kevin Frank
Turfgrass Extension
Phone: 517-353-0147
Email: [redacted]
Support Staff:
Aaron Hathaway,
Research Assistant II

Dr. David Gilstrap
Senior Academic Specialist
Phone: 517-353-0140
Email: [redacted]

Dr. Thom Nikolai
Senior Academic Specialist
Phone: 517-353-0133
Email: [redacted]
Support Staff:
Aaron Hathaway,
Research Assistant II

Dr. John N. Rogers III
Coordinator, Two-Year Golf Turf
Phone: 517-353-0136
Email: [redacted]
Support Staff:
[redacted]

Dr. Joe Vargas
Phone: 517-353-9082
Email: [redacted]
Support Staff:
Ron Detweiler,
Research Assistant III
Nancy Dykema, Research Assistant III
Adam Palmatier, Research Assistant I
[redacted]

Dr. Emily Merewitz
Turfgrass Physiologist
Phone: 517-353-0203
Email: [redacted]
Support Staff:
[redacted]
Sha Liu, Research Assistant I

MTESP

Adam Ikamas, Coordinator
Email: adamikamas@migcsa.org

ENTOMOLOGY

Dr. David Smitley
Phone: 517-355-3385
Email: [redacted]
Support Staff: Erica Hotchkiss, Research Assistant I
[redacted]

HANCOCK RESEARCH CENTER

Jesse Sholl, Farm Manager
Phone: 517-353-3117

Adam Palmatier, Operations
Coordinator Phone: 517-353-3117

MSU TURFGRASS INFORMATION CENTER

Peter Cookingham, Head
Phone: 517-353-7209
www.tic.msu.edu

MICHIGAN TURFGRASS FOUNDATION

MTF

P.O. Box 27156
Lansing, MI 48909-7156

www.michiganturfgrass.org
Phone: 517-392-5003
miturfgrass@gmail.com

The MTF Mission:

"To work in partnership with Michigan State University, supporting ongoing programs in research, education and extension in the area of professional turfgrass management that will benefit all individuals who manage turf grasses or derive pleasure from the results of such management."

From: Frank, Kevin
To: Mitchelson Carey
Cc: Eric Davey; Fouty, Amy; Boak Curt; Dan Lucas; Doug Johanningsmeier
Subject: Re: MTF CONFERENCE GUIDE
Date: Monday, October 22, 2018 12:53:52 PM

I noticed a couple other edits while posting the info on wild apricot.

Pg. 15 under equip techs session

John Garlets (last name spelled incorrectly)
Tom Burke (last name spelled incorrectly)

Pg. 17

1:30 PM presentation by Ben Hamza - "Diagnosing" is misspelled

2:30 PM presentation by Kevin Frank "Turf" the T is missing in the presentation title

thanks
kwf

> On Oct 22, 2018, at 11:42 AM, Carey Mitchelson <cmitchelson@collegefields.net> wrote:
>
> Couple of items:
> Will check others
>
> -
> -
> Pg 5
> Annual Conference 89th (not 88th)
> 88th Appears on Fouty and Mitchelson message
>
> Blank pages?
> Jim Timmerman will provide info of Meritorious Award.
> Other?
>
> Pg 19
> Group rate- Listed as $1155 – just checking to see if accurate
>
> Pg 21 –
> 5 candidates: **(3 incumbents)** / **1 filling 3 year term** (incumbent) remaining (Fouty) / **1 filling 2 year term** remaining (Pylar)
> Need to correct pictures to match bio /Need bio/pic Mark Wildeman
>
> Curt Boak – Lawn Tech – Incumbent
> Representing: Lawn Applicator

Eric Davey – Prestwick Village GC – Incumbent
Representing: Greater Detroit District

Mark Wildeman(not shown) – Clio Country Club – Incumbent
Representing: At Large

Dan Jennings- Diamond Pro
Representing: Sports and Institutional Turf
(Filling final 3 years Term – President: Amy Fouty)

Craig Moore- Marquette Golf Club
Representing: At Large
(Filling final 2 years Term – Board of Director: Rob Pylar)

Pg 22

Executive Director
Carey Mitchelson

Will keep looking

Director of Operations
College Fields Golf Club
Office – 517-332-8100
Cell – [redacted]
cmitchelson@collegefields.net

From: Eric Davey [redacted]
Sent: Monday, October 22, 2018 6:50 AM
To: Carey Mitchelson <cmitchelson@collegefields.net>; Amy Fouty [redacted]; Curt Boak <cmb@lawntechofmi.com>; Dan Lucas [redacted]; Doug Johanningsmeier <djohanningsmeier@harrells.com>; Frank, Kevin [redacted]
Subject: Fwd: MTF CONFERENCE GUIDE

Please find conference guide review 1. below please reply with corrections as needed. Quick note things I have noticed so far is candidates page photos are mixed up.

ERIC

Begin forwarded message:

From: Dave Lee <dlee@brdprinting.com>
Subject: **RE: MTF CONFERENCE GUIDE**
Date: October 19, 2018 at 4:58:47 PM EDT
To: Eric Davey <[redacted]>

First draft attached. Dani mentioned that more content must be to come?
Please review and reply with approval, or note any changes you would like.

From: Frank, Kevin
To: Mitchelson Carey
Cc: Eric Davey; Fouty, Amy; Boak Curt; Dan Lucas; Doug Johanningsmeier
Subject: Re: MTF CONFERENCE GUIDE
Date: Monday, October 22, 2018 12:55:24 PM

---

ugh another one -

pg. 17 - 2:30 PM talk - presented should be 'Bert' not Berg

On Oct 22, 2018, at 11:42 AM, Carey Mitchelson <cmitchelson@collegefields.net> wrote:

Couple of items:
Will check others

-

-

Pg 5

Annual Conference 89th (not 88th).

88th Appears on Fouty and Mitchelson message

Blank pages?
Jim Timmerman will provide info of Meritorious Award.
Other?

Pg 19

Group rate- Listed as $1155 – just checking to see if accurate

Pg 21 –

5 candidates: **(3 incumbents)** / **1 filling 3 year term** (incumbent) remaining (Fouty) / **1 filling 2 year term** remaining (Pylar)
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Representing: Lawn Applicator

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Pg 22

Executive Director
Carey Mitchelson

Will keep looking

Director of Operations
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Office – 517-332-8100
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Please find conference guide review 1. below please reply with corrections as needed. Quick note things I have noticed so far is candidates page photos are mixed up.

ERIC

Begin forwarded message:

From: Dave Lee <dlee@brdprinting.com>
Subject: RE: MTF CONFERENCE GUIDE
Date: October 19, 2018 at 4:58:47 PM EDT
To: Eric Davey <edavey29@aol.com>

First draft attached. Dani mentioned that more content must be to come?
Please review and reply with approval, or note any

changes you would like.

From: Fouty, Amy
To: Georgeanna Heitshusen; Jared Knoodle; Bumpus, Jan
Cc: Flynn, Andrew
Subject: Fwd: Men"s Soccer - B1G Tournament
Date: Wednesday, October 24, 2018 11:42:11 AM

Please see the following.
A

Sent from my Verizon, Samsung Galaxy smartphone

-------- Original message --------
From: "Anthony, Stephen" <[redacted]
Date: 10/24/18 10:29 AM (GMT-05:00)
To: "Fisher, Kara" <[redacted], "Drone, Denzel" <[redacted]
"Green, Alexandra" <[redacted], "Fouty, Amy" <[redacted]
Cc: "Haller, Alan" <[redacted], "Ianni, Gregory" <[redacted]
"Pignataro, James" <[redacted], "Sleeper, Charles" <[redacted]
"Smith, Jennifer" <[redacted], "Pauga, Kevin" <[redacted]
"Beekman, William" <[redacted], "Schager, Paul" <[redacted]
Subject: Men's Soccer - B1G Tournament

In viewing the B1G standings and remaining games to be played, men's soccer is guaranteed to finished in the top 4; between 2nd and 4th place for the B1G regular season. Men's soccer will host a quarterfinal B1G Tournament match on Sunday, November 4th.

The B1G Semi-final and Championship matches will be held on November 9th and 11th at Grand Park in Indianapolis, Indiana.

Stephen Anthony
Associate Athletic Director
550 S. Harrison Rd. 4030C, East Lansing, MI 48823
P: (517) 353-9158 C: [redacted]

From: Fouty, Amy
To: Doug Johanningsmeier
Subject: RE: Mtf Store
Date: Tuesday, October 23, 2018 4:27:00 PM
Attachments: image001.png
image002.png

Let's discuss this at a later date, maybe next week. Sounds interesting.
A

From: Doug Johanningsmeier <djohanningsmeier@Harrells.com>
Sent: Monday, October 22, 2018 9:15 PM
To: Fouty, Amy [redacted]
Subject: Mtf Store

Hey you know we have the ability to sell things through our Website. Do r
We want to remake State of MI 1st and 10th tee pesticide signs and try to make a buck?

Doug Johanningsmeier
Territory Manager
248-302-2054 Mobile
djohanningsmeier@harrells.com
Dougj1@Harrellsllc

Harrell's
Growing a Better World®
720 Kraft Road
Lakeland, FL 33815
www.harrells.com

From:	Carey Mitchelson
To:	Fouty, Amy; Doug Johanningsmeier; "Dan Lucas"; "Boak Curt"; "Dan Mausolf"; "Scott Rettmann"; Eric Davey; "Brad Lazroff"; "Mark Wilderman"; "Robert Pylar"; "Matt Gaver"; "Holmes Jeff"
Subject:	MTF Board Meeting 10-24-2018
Date:	Tuesday, October 23, 2018 9:04:26 AM
Attachments:	MTF BoD Meeting Minutes - Sept 20 - 2018.docx MTF Board Meeting - Agenda 10-24-2018.docx

All,

As a reminder the MTF Board of Directors will be conducting a Meeting of the Board on 10/24/2018 at 1:00pm – 4:00pm.

Attached are:

- Minutes from 9/20/2018 Meeting
- Agenda for 10/24/218 Meeting

Thank you,
cm

Director of Operations
College Fields Golf Club
Office – 517-332-8100
Cell – 517-525-2424
cmitchelson@collegefields.net

MTF Board of Directors Meeting
September 20, 2018
Lasch Family Golf Center
East Lansing, MI
1pm

I. Meeting Call to Order by Amy Fouty at 1:10 pm.

II. Roll Call: Carey Mitchelson, Doug Johanningsmeier, Amy Fouty, Dan Lucas, Curt Boak, Mark Wildeman. Board majority lacking. Board not in quorum - Meeting not available for vote.

III. Guests present include Dr. Frank, Dr. Vargas, and Gordon LaFontaine.

IV. Consent of Agenda
  i. Motion to accept Agenda- Mark Wildeman
  ii. Motion seconded by- Curt Boak

V. Approval of Minutes (May 20, 2018)
  i. Motion to accept minutes- Curt Boak
  ii. Motion seconded by- Mark Wildeman

VI. Executive Reports

a. President (Fouty)

i. Requests adjusting meeting to accommodate time and agenda
  1. Fouty requests next meeting date to be scheduled:
  2. Dates to be polled: Oct 17 or Oct 24

ii. **Research draft letter "Procedures for Funding"** of is presented for Board for review ***(Attached)***
  1. Dr. Frank requested to review and finalize letter
  2. Dr. Frank comments positively on content and intent of letter
  3. Letter contains dates for submission of proposals-
    a. Frank suggests single date for ease of all involved.
    b. Dates to be considered Dec 1 / Feb 1 – Frank to return with date requested

iii. **Fouty requests template of proposed "Procedures"** be provided by Frank to keep consistent content and methods - For both submissions and review.
  a. Action item – Frank to provide template within 2weeks

b. Executive Director (Mitchelson)

i. LaFontaine Golf Outing
  1. Mitchelson submits letter from Coyote Preserve indicating increase in cost of hosting LaFontaine outing.
  2. Board indicates approval of additional cost and requests to have Coyote Club contacted to confirm date.
    a. Action item – Mitchelson to contact and approve LaFontaine Golf outing date

ii. Travis Pointe CC
  1. requested letter of acknowledgement for John Seefledt on his retirement. Letter completed and mailed (copy of letter reviewed by board) ***(Attached)***

iii. Student/Assistant Day – College Fields
  1. Larger than usual attendance by students and industry personel

2. Students in attendance given information on Scholarships
3. Students informed they will be provided MTF Membership for no cost.
    a. Emails collected from students to enroll
4. Student were given opportunity to Moderate Sessions and serve at tables for MTF Turf Conference. 3 Volunteers at meeting.
    a. Action Item – Mitchelson to update Wild Apricot for Conference items and include Students as Members

iv. **TT4- Donating Clubs**
1. Donating TT4Turf courses will be given MTF Membership for the upcoming year.
    a. Action Item – Mitchelson to include all clubs not currently MTF members as members for the 2018-19 year.

v. **Dr. Beard**
1. Thank you from American Heart Association was received / also included: Cliff Haka / Pete Cookingham

c. ***Treasures (Johanningsmeier)***
i. Brief report of Financials provided by Johanningsmeier
ii. GAM income / Membership income – both above projected
iii. Field Day income: $31,244 Gross / Net income -$17,128
iv. Wild Apricot – Terminology re: General Fund needs to be updated
v. Events income/expenses - explained / reviewed
vi. Cost of Accounting
1. Review of other CPA firms be considered
2. Current firm (Manner Costerisan) have become increasingly costlier
    a. Action item – Executive Committee to discuss options. Provide Board with updates
vii. Description of how Graduate Assistantship Fund would financed by moving $140,000 from each Endowment (LaFontaine / Founders Society)
1. Application timing and Details for GSF discussed.
    a. Dr. Frank explains Sandy Litchfield is contact for accepting application
    b. Applications become available – Dec/Jan
viii. President Fouty requests meeting with Dr. Kells to gather information
    a. Action item – Mitchelson to set up meeting with Fouty/Johanningsmeier/Mitchelson & Kells to go over MTFGSF

d. ***Guest Dr. Joe Vargas requests discussion*** regarding proposal:
i. Dr. Vargas submits proposal to request funding to research moss development on Putting Greens ***(Attached)***
ii. Research to include:
1. Current chemical methods available only overseas
2. Impact of rolling
iii. Requests funding of:
1. Technician (preferred) - $20,000 or/
2. Graduate Asst. - $28,000

iv. Board reviews and will meet to determine best method to proceed with request

e. ***Gordon LaFontaine***
   i. Thanks Board of Directors for recent presentation of Plaque at Hancock Turf Research Center that was recently installed (Presented at Field Day)

VII. Committee Reports

a. Conference (Boak)
   i. Meeting with Kellogg Hotel – Scheduled for Sept 25
   ii. MTF Conference – Committed for years 2020 & 2021
   iii. Vendor registration open on W/A
   iv. New to include on website:
      1. Sponsorships
      2. Drink Tickets
      3. Parking Tickets (sold to registrants)
   v. Articles by BOD and ED due to MiGCSA mailing – Due Oct 10
   vi. BOD / MSU Students requested to participate on tables/Moderators
   vii. Lansing Visitors and Convention Bureau
      1. Use of labor – no conclusion (Maynot be required)

b. Scholarships/Awards/Nomination (Lucas)
   i. Individuals interested in participating as Board members
      1. Brian Mavis / Craig Moore
      2. Suggested to contact: Kris Early
   ii. Meritorious Award
      1. [redacted] all considered
   iii. Committee will include chosen candidate in Mag/Conference Brochure

VIII. Old Business
   a. None Stated

IX. New Business
   a. None Stated

X. Adjournment
   a. 3:45 pm

September 20, 2018 MTF Board of Director Meeting Minutes
Respectfully submitted Sept 30, 2018

Carey Mitchelson
MTF – Executive Director

Agenda

Oct 24th, 2018
1:00 pm – 4:00 pm
HRC
East Lansing, MI

I. Meeting Called to Order (Amy Fouty)

II. Roll Call (Dan Mausolf)

III. Consent of Agenda (Amy Fouty) (Motion Required)

IV. Approval of Minutes (September 2018) (Amy Fouty) (Motion Required)

V. Executives Report
- a. Secretary (Dan Mausolf)
- b. Treasures Report (Doug Johanningmeier)
  (Motion required)
- c. Executive Directors report (Carey Mitchelson)
- d. Presidents Report (Amy Fouty)

VI. Committee Reports
- a. Conference (Boak/Frank/Wilderman)
- b. Scholarship/awards/nomination (Lucas)
  - i. Meritorious service recommendation 2019
  - ii. Student scholarships/ interview date
- c. GAM (Matt Gaver &Eric Davey)
- d. Research update (Dan Mausolf & Jeff Holmes)
- e. Endowments (Doug Johanningsmeier)
- f. Communication (Eric Davey/Boak/Frank)
  - i. Pre-Conference brochure
  - ii. Post card
  - iii. Conference booklet

VII. New Business
- a. New items
  - i. Letter for funding
  - ii. Graduate assistantship fund document
  - iii. TT4Turf 2019
  - iv. BOD conference involvement

VIII. Adjourn (Motion Required)

From: MVP AthleticFields

To: Beekman, William; Ianni, Gregory; Atkinson, Rick; Fouty, Amy; Miller, Jane; Baughman, Linda; Fisher, Zachary; Fisher, Kara; Phlegar, Benjamin; Carey, Michael; Bazzano, Angelina Rose; Carter, Kasey; Ryan, Theresa; [redacted] Van Ameyde, Mark; Sikes, Graham; Knull, Helen; [redacted] Lubahn, Casey; Rensing, Damon; Orlando, Gene; Joseph, Jacqueline; Hill, Corrie; Sorden, Benjamin; [redacted] Slobodnik, Stacy; Saxton, Thomas; Bruno, Kim; kris.kassel@foxsports.net

Subject: MSU Athletic Fields

Date: Wednesday, October 24, 2018 12:56:56 PM

Hi!

MVP Athletic Fields will be starting operations in Southeast Michigan this spring providing athletic field design, construction, renovation, maintenance, laser grading and consulting!

Originally being from Macomb, MI, we moved out of state for the last few years to develop our skills and learn the trade. Now, with more than 10 years of experience, we are bringing our talents back to service the same fields that we grew up playing on, and create new fields for the future generations to enjoy! As we start to plan out our 2019 season, we want to offer all the support that we possibly can to our surrounding communities! So please feel free to reach out to us with any athletic field related questions!

Enjoy the rest of 2018, and we hope to speak with you soon!

P.S. I am an MSU graduate! Go Green!

Sincerely,

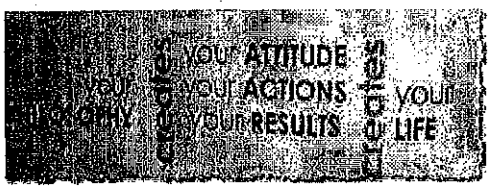
Joe & Andy of MVP Athletic Fields

Facebook and Instagram: @MVPAthleticFields

From: Fouty, Amy
To: Chris
Subject: RE: MSU Spartan stadium
Date: Wednesday, October 24, 2018 4:42:00 PM
Attachments: image001.png

Got it thanks,
I will get going on the PO on our end.

Amy J. Fouty, CSFM
Assistant Athletic Director
Michigan State University
223 Kalamazoo Street, RM 228
Jenison Field House
East Lansing, MI 48824-1025
Office- 517-884-6716
Cell- [redacted]
Fax- 517-432-1047
Email- [redacted]



From: Chris <clund@ttfarms.com>
Sent: Wednesday, October 24, 2018 1:49 PM
To: Fouty, Amy [redacted]
Subject:

This E-mail was sent from "RNPE5A2A3" (MP C2800/LD528C).

Scan Date: 10.24.2018 13:45:22 (-0400)

From: Fouty, Amy
To: Burgess, Julee
Subject: RE: MSUFPA Reunion in Duffy Expected Numbers
Date: Tuesday, October 23, 2018 3:56:00 PM
Attachments: image001.png

Ok thanks,
A

From: Burgess, Julee
Sent: Tuesday, October 23, 2018 11:18 AM
To: Fouty, Amy [redacted]
Subject: MSUFPA Reunion in Duffy Expected Numbers

Amy,

We are expecting 220 in attendance on Saturday at the Weave. Thanks for coordinating the trash cans and dumpster for the caterers.

Julee Burgess
MICHIGAN STATE
Director of Varsity 'S' Club Operations/
Special Events Coordinator
1855 Place
550 S. Harrison Road
East Lansing, MI 48823

O: 517.355.8523
D: 517.884.7370
E: [redacted]

From:	Satish Udpa, EVP for Administrative Services
To:	Fouty, Amy
Cc:	MSU Ideas; Carter, Christine
Subject:	MSU Ideas Portal - Help Improve MSU!
Date:	Tuesday, October 23, 2018 1:00:24 PM
Attachments:	image002.png image003.png

To increase employee engagement and generate ideas on how to improve the campus community, our office has launched **MSU Ideas** (www.ideas.msu.edu), a web portal where faculty and staff can submit ideas, suggestions, feedback, and thoughts on matters relating to the campus environment!

This is a crowdsourced, idea-management tool that enables faculty and staff to collaborate and submit feedback and ideas that are important to them and their work. This two-minute video best explains what MSU Ideas is about: https://youtu.be/B5ma3_9yNlE.

MSU employees can engage and respond to the following current challenges:

1. What ideas do you have to best engage employees?
2. What cost saving measures should MSU implement or explore?
3. How would you re-conceptualize the Academic Orientation Program (AOP) for 2019?
4. How can the University be more welcoming to parents and family members of new students?
5. What stories and examples can you share that highlight positive actions toward Sustainability?
6. What ideas do you have that could contribute to the MLK celebrations being planned for 2019?
7. What is something you or your unit is doing that everyone at MSU could benefit from?
8. What policy or process would you like changed or improved at MSU and why?
9. What can Information Technology do to improve the faculty, researcher, staff, and student experience?
10. What thoughts, feedback, and reactions do you have related to the MSU mobility report?
11. What new and innovative thoughts do you have regarding energy use and conservation here at MSU?
12. Volunteer to be an ambassador of the portal and suggest future challenges/topics to pose to MSU Faculty and Staff!

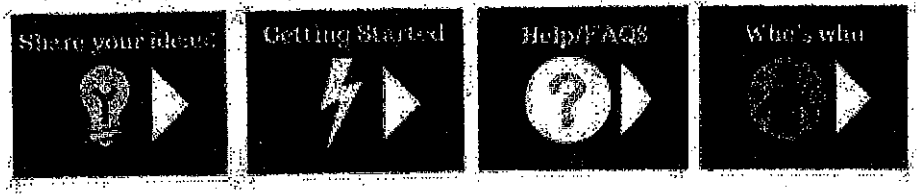
MSU ideas is about innovation and empowering our employees to help us do things better, quicker, and more efficiently. We invite you to login with your MSU NetID and join the conversation today! A preview of the portal can be found below:

Welcome to the MSU Ideas Home Page

MSU Ideas is about innovation and empowering our employees to help us do things better, quicker, and more cost effective.

Find out more by watching this video!

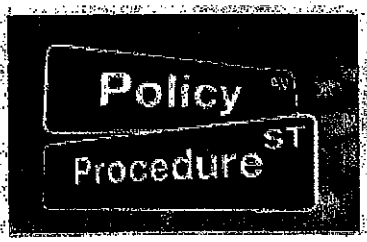
FIND OUT MORE



CHALLENGE ZONE

Challenges/Topics

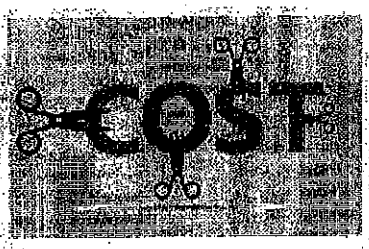
Below are all of the challenges (i.e. questions) for which you can submit your ideas and feedback. There are ambassadors assigned to each challenge who are responsible for evaluating submissions and content. The Executive Vice President's Office for Administrative Services is currently overseeing this platform. Be a part of the conversation and have your voice heard today! Submit an idea, comment on an existing post, and/or rate someone else's idea with a thumb's up.



Policy/Procedure

What policy or process would you like changed or improved at MSU and why? We welcome your input and ideas to help MSU be more effective in our

5 26 4 25



Cost Saving Measures

What cost saving measures should MSU implement or explore? We welcome your input and ideas to help explore innovative ideas towards cost

4 16 7 19

Sustainability Stories

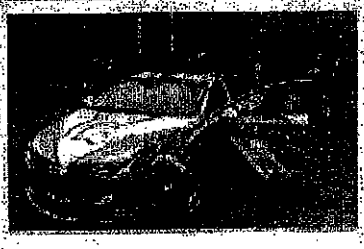
Share your Sustainability stories! MSU has been achieving many milestones towards sustainability. These may include changing habits, saving energy,

3 10 3 12

Employee Engagement

What ideas do you have to best engage employees? Engagement is defined broadly to mean anything from events and activities to ways to improve

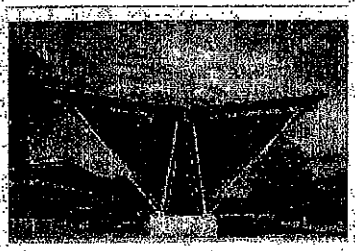
3 14 0 14



Campus Mobility

What thoughts, feedback, and reactions do you have related to the MSU mobility report? The MSU Mobility teams have been working on these key

21 133 43 60



Energy Use & Conservation

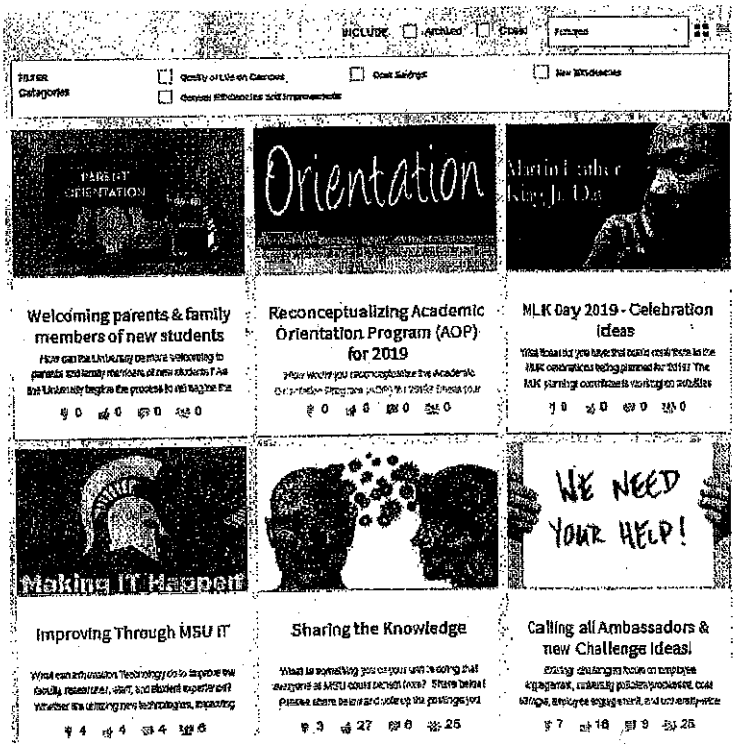
What new and innovative changes do you have regarding energy use and conservation here at MSU? In 2012, the MSU Board of Trustees

19 127 32 59

CHALLENGE ZONE

Challenges/Topics

Below are all active challenges (i.e. questions) for which you can submit your ideas and feedback. These are admissions assigned to each challenge who are responsible for activating submissions and content. The Executive Vice President's Office for Administrative Services is currently overseeing this platform. Be a part of the conversation and have your voice heard today! Submit an idea, comment on an existing post, and/or add someone else's idea with a thumb's up!



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4 16 7 19

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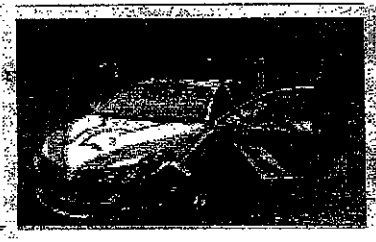
Share your Sustainability Stories! MSU has been achieving many milestones towards sustainability. These may include changing habits, saving energy,

3 10 3 12

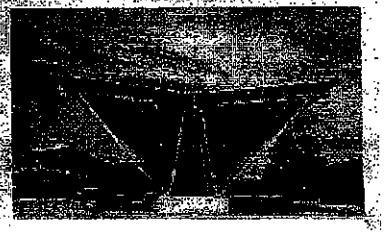
Employee Engagement

What ideas do you have to best engage employees? Engagement is defined broadly to mean anything



Campus Mobility

What thoughts, feedback, and reactions do you have related to the MSU mobility report? The MSU



Energy Use & Conservation

What new and innovative thoughts do you have regarding energy use and conservation here at

From: Fouty, Amy
To: Kesler, Seth
Cc: Atkinson, Rick
Subject: FW: MSU Purchase Order# 445891
Date: Tuesday, October 23, 2018 3:46:00 PM

FYI,
A

From: Schager, Paul
Sent: Tuesday, October 23, 2018 3:20 PM
To: Steve Vanderheyden <steve@band-ayd.com>
Cc: Fouty, Amy [redacted]
Subject: RE: MSU Purchase Order# 445891

Steve, you need to be in position 2.5 hours prior to kick. For a noon game staff arrives and could receive you as early as 7 a.m. and you would need to be in place no later than 9:30 a.m. Thank you for your cooperation. Paul

---

From: Schager, Paul
Sent: Tuesday, October 23, 2018 3:16 PM
To: 'Steve Vanderheyden' <steve@band-ayd.com>
Cc: Fouty, Amy [redacted]
Subject: RE: MSU Purchase Order# 445891

Steve, you guys were late for the game on Saturday. You can't be late for any games, but especially big games. Please arrive early. Thank you. Paul

---

From: Schager, Paul
Sent: Tuesday, September 18, 2018 5:01 PM
To: 'Steve Vanderheyden' <steve@band-ayd.com>
Subject: RE: MSU Purchase Order# 445891

Steve, we need to talk about Midnight Madness on Oct. 5. We will need fire dragons and maybe some other things on stage to resemble fire. It's going to be a magic based event with a couple of illusions used to intro coaches. I can fill you in when we talk. I will call you in the next day or two. Thanks. Paul

From: Steve Vanderheyden <steve@band-ayd.com>
Sent: Thursday, September 6, 2018 12:12 PM
To: Erin Lynch [redacted]
Cc: Schager, Paul [redacted]; Twitchell, Chris [redacted]
Subject: Re: MSU Purchase Order# 445891

Hi Erin,

Thank you for sending this over. I have attached the COL as well as the invoice for the first game

Thanks!

Steve Vanderheyden
Owner/President

office: 248-677-0466
www.band-ayd.com

On Wed, Sep 5, 2018 at 1:08 PM, Erin Lynch [redacted] wrote:

> Hi Steve,
>
> Please see the attached MSU PO# 445891 for the 2018 Football season intros and Midnight Madness package. I will need a current copy of your Certificate of Liability Insurance for our records.
>
> Invoices can be sent directly to Accounts Payable at [redacted] See PO for instructions. Feel free to contact me with any questions.
>
> Thanks and have a great day!
> Erin
>
> Erin Lynch
> Purchasing Agent
>
> MSU University Services
> 1855 Place
> 550 S Harrison Rd
> East Lansing, MI 48824
> (517) 353-7095 [redacted]
> *Helping MSU make a difference in the world by providing effective supply chain solutions*

From: Steve Vanderheyden
To: Schager, Paul
Cc: Fouty, Amy
Subject: Re: MSU Purchase Order# 445891
Date: Wednesday, October 24, 2018 9:22:20 PM

I understand, and have addressed this issue with my crew

I apologize for any inconvenience this may have caused last week

Thanks.

Steve Vanderheyden

On Tue, Oct 23, 2018 at 3:20 PM Schager, Paul [redacted]> wrote:

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Erin

Erin Lynch

Purchasing Agent

MSU University Services
1855 Place

550 S Harrison Rd

East Lansing, MI 48824

(517) 353-7095 [redacted]

Helping MSU make a difference in the world by providing effective supply chain solutions

--

Steve Vanderheyden
Owner/President

office: 248-677-0466
www.band-ayd.com

From: Customerservice@nationalcar.com
To: Fouty, Amy
Subject: National Rental Agreement 941370163
Date: Monday, October 22, 2018 2:30:01 PM
Attachments: National Rental Agreement 941370163.pdf

National

Per your request, please see the attached PDF document for the Invoice Details.

National

Rental Agreement # 941370163
Invoice # 90108310812

Renter Information

Renter Name
AMY FOUTY

Renter Address
[redacted]

Contract
MICHIGAN STATE UNIVERSITY

Rental Credits
1 credit has been awarded for this rental

Vehicle Information

4DR FRONT-WHEEL DRIVE
License #: 4374824
State/Province: NH

Vehicle Class Driven
STANDARD SUV 2WD SUV - STANDARD 2WD

Vehicle Class Charged
Standard 4-Door/Automatic/Air

Odometer Mileage/Kilometers
Starting: 9,659 **Ending:** 9,741
Total: 82

Thank you for renting with National Car Rental

We appreciate your business!
This email was automatically generated from an unattended mailbox, so please do not reply to this e-mail.
If you have any questions about your rental, please view our Frequently Asked Questions or send us a secured message by visiting our Support Center

Trip Information

Pickup
Mon, Oct 22 2018 9:06 A.M.
PHILADELPHIA INTL ARPT (PHL)
1 ARRIVALS RD
PHILADELPHIA, PA 19153
USA

Return
Mon, Oct 22 2018 2:18 P.M.
PHILADELPHIA INTL ARPT (PHL)
1 ARRIVALS RD
PHILADELPHIA, PA 19153
USA

Rental Charges

Rental Rate	Time & Distance 1 Day at $40.00 / Day	$40.00
Coverages	Loss Damage Waiver Full	Included
Add-Ons	Refueling Charge ($4.47 / Gallon)	$22.37
Mileage	Unlimited Mileage	Included
Taxes and Fees	Pta Fee 2.00/day ($2.00 / Day)	$2.00
	Phil Vehicle Rental Tax 2 Pct (2.00%)	$0.89
	Phl Tax (2.00%)	$0.89
	Concession Fee Recovery 11.11 Pct (11.11%)	$4.44
	Vehicle Rental Tax (2.00%)	$0.89
	Customer Facility Charge 8.00/day ($8.00 / Day)	$8.00
	Pa Tax (6.00%)	$2.67
Total		**$82.15**
(Subject to audit)		
Amount charged on Oct 22 2018 to [redacted]		($59.78)
Amount charged on Oct 22 2018 to [redacted]		($22.37)
Amount Due		**$0.00**

From: Moreno Jr, Juan
To: Proulx, Simone; Mejorado, Cynthia; Nogle, Sally; Hadden, Hanna; Edwards, Todd; Briningstool, Garrett; White, Sheldon; Huber, Jacob; Fouty, Amy; Hoke, Thomas; Mannie, Kenneth; Harper, Matthew
Subject: NIIKE ORDER #3
Date: Tuesday, October 23, 2018 10:46:45 AM
Attachments: 2019 NIKE SHOES.docx
Importance: High

Good Morning,

We are emailing to inform you that the third and final order window is open on Nike Game Day. Deadline for this window will be November 5,2018 at noon. I have attached the artwork for the Coaches Game shoes and for Coaches Camp shoes. I will notify you as soon as the "Travel Shoe" aka the Spartan Shoe is available to order. Like always if you have any question or concerns please feel free to contact us.

Thanks Again,

Juan

Juan R. Moreno Jr
Football Equipment Manager
Skandalaris Football Center
771 Chestnut Road
(Equipment Room 115)
East Lansing, MI 48824-1214
Office: (517) 884-8998

SPARTANS EQUIPMENT

From: Fouty, Amy
To: Flynn, Andrew; Georgeanna Heitshusen; Bumpus, Ian; Jared Knoodle
Subject: Fwd: NIKE ORDER #3 2019 NIKE SHOES
Date: Wednesday, October 24, 2018 11:45:46 AM
Attachments: 2019 NIKE SHOES.docx
Importance: High

It is time to order shoes for 2019.
Please let me know how many, what style, and size. You will be taxed on your selections. See attachment 3 shoes styles.
A

Sent from my Verizon, Samsung Galaxy smartphone

-------- Original message --------
From: "Moreno Jr, Juan" [redacted]
Date: 10/24/18 8:54 AM (GMT-05:00)
To: "Proulx, Simone" [redacted], "Mejorado, Cynthia" [redacted], "Nogle, Sally" [redacted], "Hadden, Lianna" [redacted], "Edwards, Todd" [redacted], "Briningstool, Garrett" [redacted], "White, Sheldon" [redacted], "Huber, Jacob" [redacted], "Fouty, Amy" [redacted], "Hoke, Thomas" [redacted], "Mannie, Kenneth" [redacted], "Harper, Matthew" [redacted]
Subject: NIKE ORDER #3 2019 NIKE SHOES

Good Morning,

Attached is the art work for all of the three shoes that we will be ordering for the team/players next year. All shoes are available to order on Game Day as of right now. Like always if you have any questions let us know.

Thanks,

Juan

Juan R. Moreno Jr
Football Equipment Manager
Skandalaris Football Center
771 Chestnut Road
(Equipment Room 115)
East Lansing, MI 48824-1214
Office: (517) 884-8998


SPARTANS
EQUIPMENT

NIKE AIR ZOOM VOMERO TB

Continue shopping »

Wholesale Price: $74.20

Retail Price: $140.00

STAFF GAME SHOE

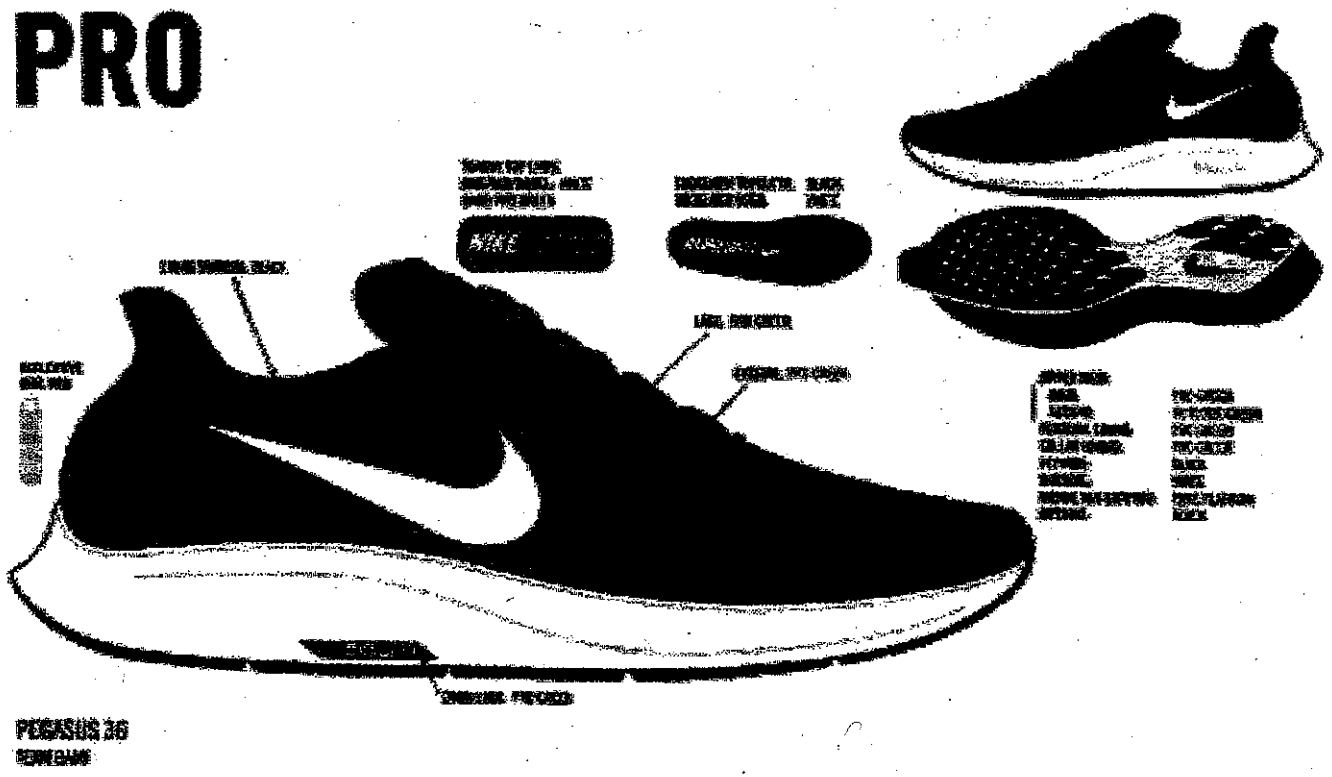
NIKE AIR ZOOM PEGASUS 36 TB

Continue shopping »

Wholesale Price: $63.60

Retail Price: $120.00

STAFF CAMP SHOE



AIR ZOOM PEGASUS 36 MICH ST

Continue shopping

Wholesale Price: $68.90

Retail Price: $130.00

TEAM TRAVEL SHOE

From: Wahl, Tressa
To: Ianni, Gregory; Fouty, Amy
Subject: RE: OCF Secchia & McLane Stadiums Field Lights - Logistics plan for drill rig
Date: Wednesday, October 24, 2018 11:55:28 AM

Ha Ha Greg! Yes, that is always an option....
Thanks for acknowledging the emails! ☺
-Tressa

From: Ianni, Gregory
Sent: Wednesday, October 24, 2018 11:51 AM
To: Wahl, Tressa [redacted]; Fouty, Amy [redacted]
Subject: RE: OCF Secchia & McLane Stadiums Field Lights - Logistics plan for drill rig

If necessary, we can cut down the trees. Ha! Just wanted you to know I do read your emails. ☺

Gregory P. Ianni
Deputy Director of Athletics
Michigan State University
1855 Place
550 S. Harrison Rd, Rm 4040B
East Lansing, Michigan 48824
517-355-5263

From: Wahl, Tressa
Sent: Wednesday, October 24, 2018 11:46 AM
To: Fouty, Amy [redacted]; Ianni, Gregory [redacted]
Subject: RE: OCF Secchia & McLane Stadiums Field Lights - Logistics plan for drill rig

Amy,
Yes there is enough space. We walked this area with the drillers last week. I might need to have some branches tied up on the Pines, but I will coordinate that work if needed.
-Tressa

From: Fouty, Amy
Sent: Wednesday, October 24, 2018 11:41 AM
To: Wahl, Tressa [redacted]; Ianni, Gregory [redacted]
Subject: Re: OCF Secchia & McLane Stadiums Field Lights - Logistics plan for drill rig

The only route i am concerned with is the route between the pines (outfield fence at bb) and the softball dugout. Is there enough room to get equipment thru there? It is not a very wide path.
A

Sent from my Verizon, Samsung Galaxy smartphone

-------- Original message --------
From: "Wahl, Tressa" [redacted]
Date: 10/24/18 11:08 AM (GMT-05:00)
To: "Fouty, Amy" [redacted], "Ianni, Gregory" [redacted]
Subject: RE: OCF Secchia & McLane Stadiums Field Lights - Logistics plan for drill rig

Amy,
We are still finalizing design items and processing contracts soon. We do not have a preliminary construction schedule yet, but as soon as I receive it from Barton Malow I will pass along to you & Greg.

Are you okay with the logistics plan routes?
-Tressa

From: Fouty, Amy
Sent: Tuesday, October 23, 2018 3:56 PM
To: Wahl, Tressa [redacted]; Ianni, Gregory [redacted]
Subject: RE: OCF Secchia & McLane Stadiums Field Lights - Logistics plan for drill rig

Tressa,
I am sure we will discuss logistics on Thursday when we meet. Do you have a time line for the project we can review before we meet Thursday?

A

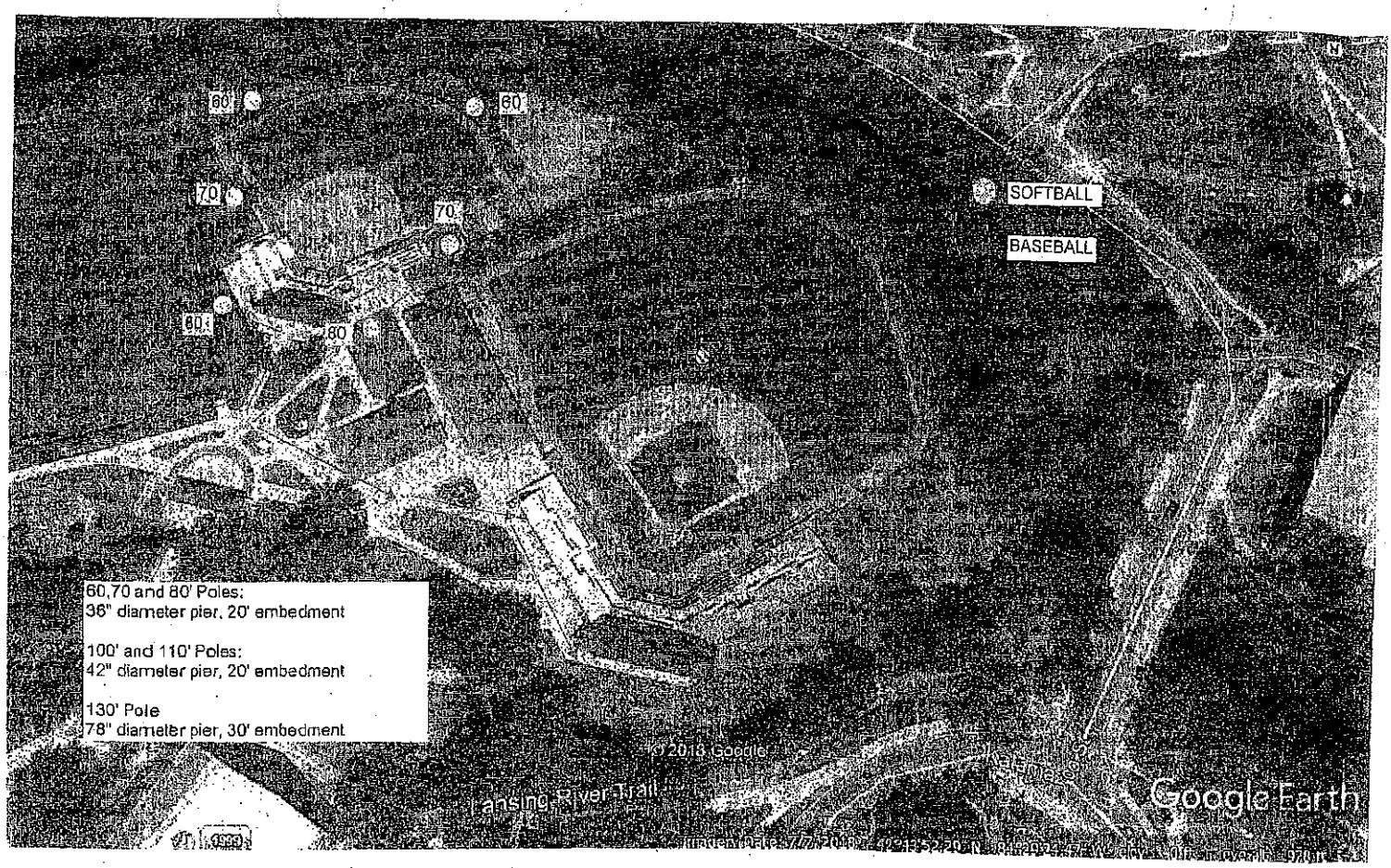
From: Wahl, Tressa
Sent: Tuesday, October 23, 2018 12:40 PM
To: Ianni, Gregory [redacted]; Fouty, Amy [redacted]
Subject: OCF Secchia & McLane Stadiums Field Lights - Logistics plan for drill rig

Hi Greg & Amy,
Please review the attached logistics plan for the drill rig routes to all the pole locations.
We will not be traversing around the NW corner/bullpen of softball outfield. I will need to get the softball camera platform moved; would Athletics be able to move this or should I have Landscape Services move the platform? Most likely, the platform's concrete pad will be replaced after all the traffic is complete.

Please let me know if you have any questions or concerns.
-Tressa

Tressa Wahl, RLA
Landscape Architect/Project Representative
PLANNING, DESIGN AND CONSTRUCTION
Infrastructure Planning and Facilities
Michigan State University
Phone: (517) 884-2185
NOTE: New Cell #: [redacted]
[redacted] ipf.msu.edu

Infrastructure Planning and Facilities
MICHIGAN STATE UNIVERSITY


60'
60'
70'
70'
60'
60'
SOFTBALL
BASEBALL
60,70 and 80' Poles:
36" diameter pier, 20' embedment
100' and 110' Poles:
42" diameter pier, 20' embedment
130' Pole
78" diameter pier, 30' embedment
© 2018 Google
Lansing River Trail
Google Earth

From: Farran, Pamela
To: Fouty, Amy
Subject: Pcard
Date: Tuesday, October 23, 2018 4:43:33 PM
Importance: High

Hi Amy. I talked to Wendy Anderson in University Services about your pcard. Unfortunately you need to contact the bank (they will do anything with your card if I call) to cancel your card and get a new one. If the transaction you identified is fraud call this number: 866-500-8262. If you do not think there was fraud but your card is not working or lost then call this number: 888-449-2273. There is a short window to report fraud so please call as soon as possible.

Let me know if you have any additional questions. Pam

From: Fouty, Amy
To: Burgess, Julee
Subject: Players association- walk thru

From: [redacted]
To: Fouty, Amy
Cc: Bonk, Jeffrey; Vanzee, Jason; Secord, Michael
Subject: Project PR195340 Confirmation
Date: Wednesday, October 24, 2018 3:10:45 PM

Your request for work has been received and entered into FAMIS. Do not reply to this message.

Request Number: PR195340
Description: SPARTAN STADIUM - FIELD REPAIR
Building: 0058 SPARTAN STADIUM
Floor:
Room:

Requestor: FOUTY AMY JENNIFER
Requestor Primary Phone:
Requestor Secondary Phone:
Alternate Requestor:
Alternate Requestor Phone:

Account Number: XA[redacted]
Sub Account Number:
Sub Object Code:
Project Code:
Org Reference ID:

Project Manager: WAHLT
Project Manager Phone: 884-2185
Project Manager E-Mail: [redacted]

For more information please refer to: https://ipf.msu.edu/apps/details/project/PR195340

Thank you.

From:	Hausbeck, Mary
To:	Teppen, Brian; Amber Bassett; Fouty, Amy; Miesel, Jessica; Sakalidis, Monique; Byrne, Jan; Donley, Christina; Brooker, Aaron Patrick; Kharadi, Roshni Russi
Subject:	SSAFE Team 1:00 today A286A
Date:	Wednesday, October 24, 2018 10:02:22 AM

Hello Everyone and Happy Wednesday!

We are meeting today at 1:00 pm in Room A286A.

There is a lot to discuss so please come if you can.

Thanks

Mary

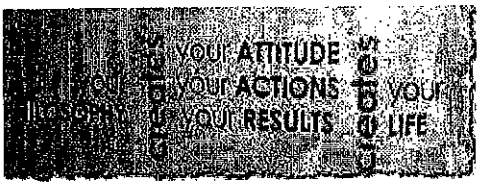
From: Fouty, Amy
To: Wahl, Tressa
Subject: FW: stadium field sod
Date: Wednesday, October 24, 2018 2:23:00 PM
Attachments: image001.png

From: Fouty, Amy
Sent: Tuesday, October 23, 2018 4:44 PM
To: Ianni, Gregory [redacted]
Cc: Atkinson, Rick [redacted]
Subject: stadium field sod

GI,
I measured 4 areas to be redone before the OSU game.
Bench areas- 16 wide x 180 ft long
Midfield (15 to 15 yard line)- 67 feet wide by 180 ft long
Grass at the tunnel entrance- 30 feet long x 12 ft wide

Roughly 19,000 ft sq by 1.75 inches deep

Amy J. Fouty, CSFM
Assistant Athletic Director
Michigan State University
223 Kalamazoo Street, RM 228
Jenison Field House
East Lansing, MI 48824-1025
Office- 517-884-6716
Cell-[redacted]
Fax- 517-432-1047
Email-[redacted]



From: Fouty, Amy
To: Christopher Carnahan (ccarnahan@fields-inc.com)
Subject: FW: stadium field sod
Date: Wednesday, October 24, 2018 1:36:00 PM
Attachments: image001.png

From: Fouty, Amy
Sent: Tuesday, October 23, 2018 4:44 PM
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Cc: Atkinson, Rick [redacted]
Subject: stadium field sod

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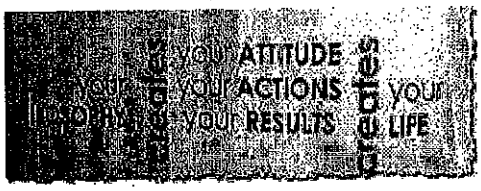
Midfield (15 to 15 yard line)- 67 feet wide by 180 ft long
Grass at the tunnel entrance- 30 feet long x 12 ft wide

I have a call into the turf farm will talk with them tomorrow 8:30am they can supply but not lay it next week.
Brian Storm will get back with me tomorrow if they are able to do the prep work and possibly lay it.
I talked to Tressa about campus logistics and we will discuss more tomorrow when I have more info on dates.

Amy J. Fouty, CSFM
Assistant Athletic Director
Michigan State University
223 Kalamazoo Street, RM 228
Jenison Field House
East Lansing, MI 48824-1025
Office- 517-884-6716
Cell-[redacted]
Fax- 517-432-1047
Email-[redacted]



From: Crum, James
To: Fouty, Amy
Subject: Soil Map
Date: Tuesday, October 23, 2018 9:02:24 AM
Attachments: Tuckahoe Sod Farm.pdf

Amy:

I used Web Soil Survey to produce the attached soil map of Tuckahoe Sod Farm. I will also send to James if you will send me his email address.

It was a great trip yesterday. I will get the receipt to you later today.

James Crum
Professor
517-353-0134 (Wk)
[redacted] (Cell)

United States Department of Agriculture

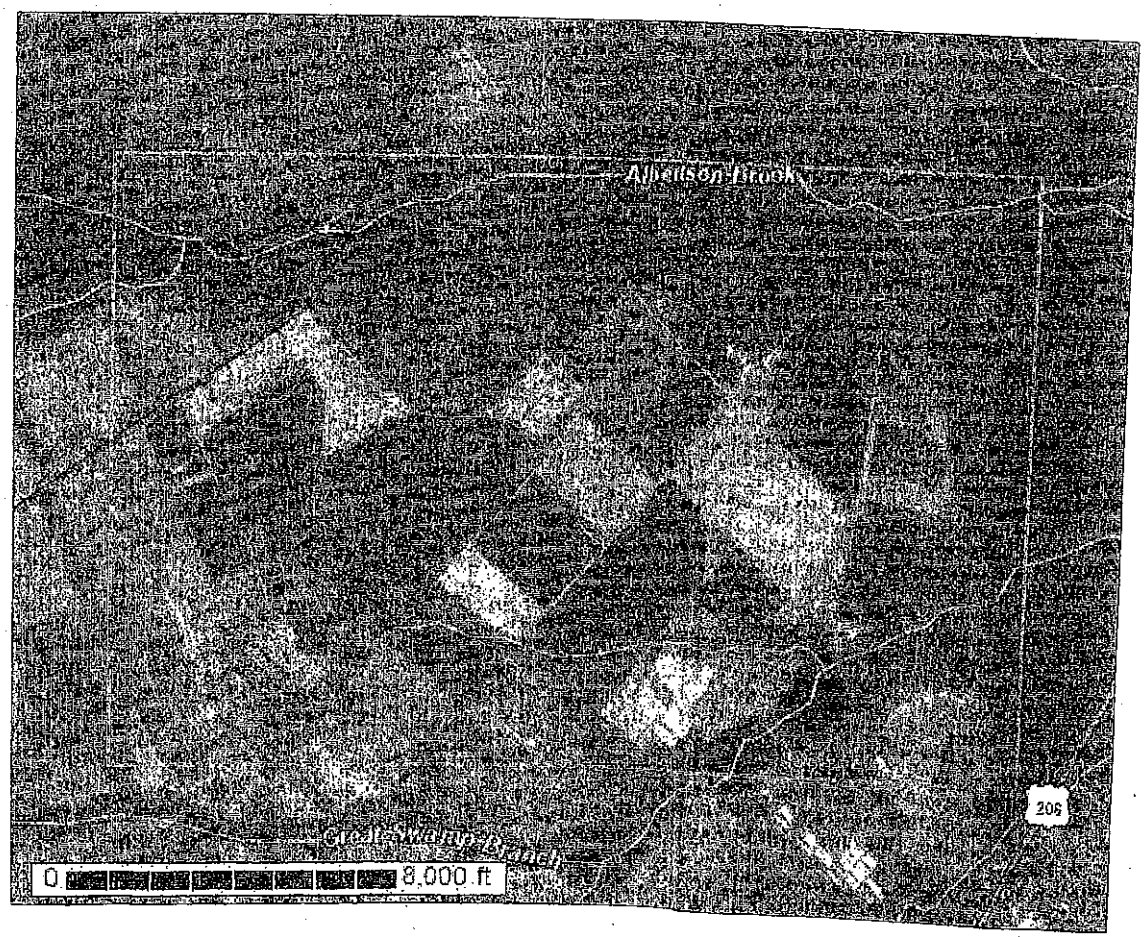
NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Atlantic County, New Jersey, and Camden County, New Jersey

Tuckahoe Sod Farm



October 23, 2018

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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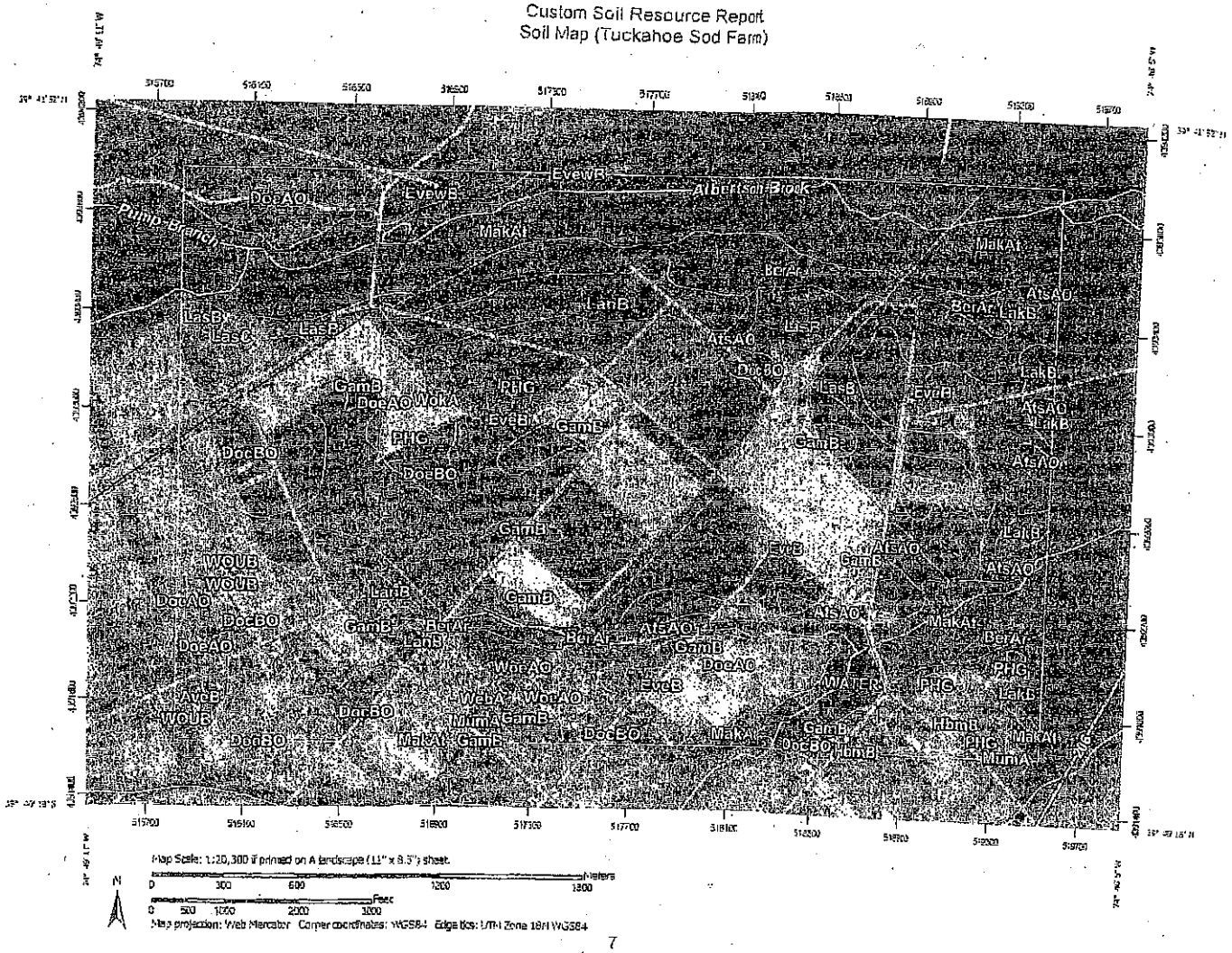
alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD). To file a complaint of discrimination, write to USDA, Director, Office of Civil Rights, 1400 Independence Avenue, S.W., Washington, D.C. 20250-9410 or call (800) 795-3272 (voice) or (202) 720-6382 (TDD). USDA is an equal opportunity provider and employer.

Contents

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map (Tuckahoe Sod Farm)



Map Scale: 1:20,300 if printed on A landscape (11" x 8.5") sheet.

Meters: 0 300 600 1200 1800

Feet: 0 500 1000 2000 3000

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 18N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at scales ranging from 1:12,000 to 1:24,000.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Atlantic County, New Jersey
Survey Area Data: Version 15, Sep 13, 2018

Soil Survey Area: Camden County, New Jersey
Survey Area Data: Version 12, Sep 13, 2018

Your area of interest (AOI) includes more than one soil survey area. These survey areas may have been mapped at different scales, with a different land use in mind, at different times, or at different levels of detail. This may result in map unit symbols, soil properties, and interpretations that do not completely agree across soil survey area boundaries.

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Aug 14, 2015—Apr 2, 2017

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background

MAP LEGEND	MAP INFORMATION
	imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend (Tuckahoe Sod Farm)

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
AtsAO	Atsion sand, 0 to 2 percent slopes, Northern Tidewater Area	51.8	2.4%
BerAr	Berryland sand, 0 to 2 percent slopes, rarely flooded	32.4	1.5%
DocBO	Downer loamy sand, 0 to 5 percent slopes, Northern Tidewater Area	9.5	0.4%
DoeAO	Downer sandy loam, 0 to 2 percent slopes, Northern Tidewater Area	12.8	0.6%
EveB	Evesboro sand, 0 to 5 percent slopes	187.8	8.7%
GamB	Galloway loamy sand, 0 to 5 percent slopes	172.3	8.0%
HbmB	Hammonton loamy sand, 0 to 5 percent slopes	36.3	1.7%
LakB	Lakehurst sand, 0 to 5 percent slopes	52.0	2.4%
LasB	Lakewood sand, 0 to 5 percent sand	87.0	4.0%
MakAt	Manahawkin muck, 0 to 2 percent slopes, frequently flooded	113.6	5.3%
MumA	Mullica sandy loam, 0 to 2 percent slopes	1.5	0.1%
PHG	Pits, sand and gravel	8.1	0.4%
WATER	Water	40.1	1.9%
WoeAO	Woodstown sandy loam, 0 to 2 percent slopes, Northern Tidewater Area	5.1	0.2%
Subtotals for Soil Survey Area		**810.1**	**37.5%**
Totals for Area of Interest		**2,159.5**	**100.0%**

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
AtsAO	Atsion sand, 0 to 2 percent slopes, Northern Tidewater Area	5.8	0.3%
AveB	Aura-Downer sandy loams, 0 to 5 percent slopes	9.6	0.4%
BerAr	Berryland sand, 0 to 2 percent slopes, rarely flooded	99.8	4.6%

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
DocBO	Downer loamy sand, 0 to 5 percent slopes, Northern Tidewater Area	190.9	8.8%
DoeAO	Downer sandy loam, 0 to 2 percent slopes, Northern Tidewater Area	72.9	3.4%
DoeBO	Downer sandy loam, 2 to 5 percent slopes, Northern Tidewater Area	8.0	0.4%
EveB	Evesboro sand, 0 to 5 percent slopes	401.6	18.6%
EvewB	Evesboro water table variant sand, 0 to 5 percent slopes	22.6	1.0%
GamB	Galloway loamy sand, 0 to 5 percent slopes	142.6	6.6%
LanB	Lakehurst-Lakewood sands, 0 to 5 percent slopes	65.2	3.0%
LasB	Lakewood sand, 0 to 5 percent slopes	65.8	3.0%
LasC	Lakewood sand, 5 to 10 percent slopes	2.8	0.1%
MakAf	Manahawkin muck, 0 to 2 percent slopes, frequently flooded	242.1	11.2%
MumA	Mullica sandy loam, 0 to 2 percent slopes	0.9	0.0%
PHG	Pits, sand and gravel	2.4	0.1%
WATER	Water	0.3	0.0%
WebA	Weeksville fine sandy loam, 0 to 2 percent slopes	4.9	0.2%
WoeAO	Woodstown sandy loam, 0 to 2 percent slopes, Northern Tidewater Area	3.8	0.2%
WokA	Woodstown and Glassboro sandy loams, 0 to 2 percent slopes	2.0	0.1%
WOUB	Woodstown and Galloway loamy sands, 0 to 5 percent slopes	5.6	0.3%
Subtotals for Soil Survey Area		**1,349.4**	**62.5%**
Totals for Area of Interest		**2,159.5**	**100.0%**

Map Unit Descriptions (Tuckahoe Sod Farm)

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the

basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Atlantic County, New Jersey

AtsAO—Atsion sand, 0 to 2 percent slopes, Northern Tidewater Area

Map Unit Setting

National map unit symbol: 2thvz
Elevation: 0 to 230 feet
Mean annual precipitation: 41 to 50 inches
Mean annual air temperature: 46 to 66 degrees F
Frost-free period: 190 to 260 days
Farmland classification: Farmland of unique importance

Map Unit Composition

Atsion and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Atsion

Setting

Landform: Flats, drainageways, depressions, deflation flats
Landform position (two-dimensional): Toeslope, footslope
Landform position (three-dimensional): Talf, dip
Down-slope shape: Linear, concave
Across-slope shape: Linear, concave
Parent material: Sandy eolian deposits and/or fluviomarine deposits

Typical profile

Oi - 0 to 2 inches: peat
A - 2 to 4 inches: sand
E - 4 to 26 inches: sand
Bhs - 26 to 34 inches: sand
Cg - 34 to 80 inches: sand

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to very high (0.71 to 19.98 in/hr)
Depth to water table: About 0 to 12 inches
Frequency of flooding: None
Frequency of ponding: None
Salinity, maximum in profile: Nonsaline (0.0 to 1.0 mmhos/cm)
Available water storage in profile: Low (about 3.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 5w
Hydrologic Soil Group: A/D
Hydric soil rating: Yes

Minor Components

Berryland, occasionally flooded

Percent of map unit: 5 percent

Landform: Flats, depressions, drainageways, deflation flats
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Talf, dip
Down-slope shape: Linear, concave
Across-slope shape: Linear, concave
Hydric soil rating: Yes

Lakehurst

Percent of map unit: 5 percent
Landform: Flats, low hills
Landform position (two-dimensional): Summit, footslope
Landform position (three-dimensional): Talf, rise
Down-slope shape: Linear
Across-slope shape: Linear, convex
Hydric soil rating: No

BerAr—Berryland sand, 0 to 2 percent slopes, rarely flooded

Map Unit Setting

National map unit symbol: v64d
Elevation: 0 to 140 feet
Mean annual precipitation: 28 to 59 inches
Mean annual air temperature: 46 to 79 degrees F
Frost-free period: 161 to 231 days
Farmland classification: Farmland of unique importance

Map Unit Composition

Berryland, rarely flooded, and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Berryland, Rarely Flooded

Setting

Landform: Flats, depressions, drainageways
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope, dip
Down-slope shape: Linear, concave
Across-slope shape: Linear, concave
Parent material: Sandy fluviomarine deposits

Typical profile

Ag - 0 to 11 inches: sand
Bh - 11 to 19 inches: sand
Bg - 19 to 32 inches: sand
B'h - 32 to 40 inches: sand
Cg1 - 40 to 44 inches: sand
Cg2 - 44 to 80 inches: stratified sand to sandy loam

Properties and qualities

Slope: 0 to 2 percent

Depth to restrictive feature: More than 80 inches
Natural drainage class: Very poorly drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): High to very high (2.00 to 20.00 in/hr)
Depth to water table: About 0 to 6 inches
Frequency of flooding: Rare
Frequency of ponding: Rare
Available water storage in profile: Low (about 3.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 5w
Hydrologic Soil Group: A/D
Hydric soil rating: Yes

Minor Components

Atsion

Percent of map unit: 5 percent
Landform: Flats
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Talf, dip
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

Mullica, rarely flooded

Percent of map unit: 5 percent
Landform: Flood plains, depressions, drainageways
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Linear, concave
Across-slope shape: Linear, concave
Hydric soil rating: Yes

Manahawkin, frequently flooded

Percent of map unit: 5 percent
Landform: Swamps, flood plains
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

DocBO—Downer loamy sand, 0 to 5 percent slopes, Northern Tidewater Area

Map Unit Setting

National map unit symbol: 2thw1
Elevation: 60 to 90 feet
Mean annual precipitation: 41 to 50 inches
Mean annual air temperature: 46 to 66 degrees F

Frost-free period: 190 to 260 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Downer and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Downer

Setting

Landform: Knolls, low hills
Landform position (two-dimensional): Summit, shoulder
Landform position (three-dimensional): Interfluve, rise
Down-slope shape: Convex, linear
Across-slope shape: Linear
Parent material: Loamy fluviomarine deposits

Typical profile

Ap - 0 to 10 inches: loamy sand
BE - 10 to 16 inches: loamy sand
Bt - 16 to 28 inches: sandy loam
C1 - 28 to 48 inches: loamy sand
C2 - 48 to 80 inches: sand

Properties and qualities

Slope: 0 to 5 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 6.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Salinity, maximum in profile: Nonsaline (0.0 to 0.2 mmhos/cm)
Available water storage in profile: Moderate (about 6.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: A
Hydric soil rating: No

Minor Components

Hammonton

Percent of map unit: 10 percent
Landform: Broad interstream divides, flats
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Dip
Down-slope shape: Convex
Across-slope shape: Linear
Hydric soil rating: No

Atsion

Percent of map unit: 5 percent
Landform: Depressions, drainageways, deflation flats, flats

Landform position (two-dimensional): Footslope, toeslope
Landform position (three-dimensional): Dip, talf
Down-slope shape: Concave, linear
Across-slope shape: Linear
Hydric soil rating: Yes

Evesboro

Percent of map unit: 5 percent
Landform: Fluviomarine terraces, dunes, flats, knolls
Landform position (three-dimensional): Riser, rise
Down-slope shape: Linear, convex
Across-slope shape: Linear, convex
Hydric soil rating: No

DoeAO—Downer sandy loam, 0 to 2 percent slopes, Northern Tidewater Area

Map Unit Setting

National map unit symbol: 2thwd
Elevation: 0 to 190 feet
Mean annual precipitation: 41 to 50 inches
Mean annual air temperature: 46 to 64 degrees F
Frost-free period: 190 to 250 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Downer and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Downer

Setting

Landform: Low hills, flats, knolls
Landform position (two-dimensional): Shoulder, summit
Landform position (three-dimensional): Interfluve, rise
Down-slope shape: Linear, convex
Across-slope shape: Linear
Parent material: Loamy fluviomarine deposits

Typical profile

Ap - 0 to 10 inches: sandy loam
BE - 10 to 16 inches: loamy sand
Bt - 16 to 28 inches: sandy loam
C1 - 28 to 48 inches: loamy sand
C2 - 48 to 80 inches: sand

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained

Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 6.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water storage in profile: Moderate (about 6.4 inches)

Interpretive groups
Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 1
Hydrologic Soil Group: A
Hydric soil rating: No

Minor Components

Galestown
Percent of map unit: 10 percent
Landform: Flats
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Rise
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Ingleside
Percent of map unit: 5 percent
Landform: Flats
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Rise
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Hammonton
Percent of map unit: 5 percent
Landform: Flats, broad interstream divides
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Talf
Down-slope shape: Linear, convex
Across-slope shape: Linear
Hydric soil rating: No

EveB—Evesboro sand, 0 to 5 percent slopes

Map Unit Setting
National map unit symbol: t136
Elevation: 0 to 150 feet
Mean annual precipitation: 28 to 59 inches
Mean annual air temperature: 46 to 79 degrees F

Frost-free period: 161 to 231 days
Farmland classification: Farmland of local importance

Map Unit Composition

Evesboro and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Evesboro

Setting

Landform: Low hills
Landform position (three-dimensional): Interfluve, side slope
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Sandy eolian deposits and/or sandy fluviomarine deposits

Typical profile

A - 0 to 4 inches: sand
AB - 4 to 17 inches: sand
Bw - 17 to 31 inches: sand
C - 31 to 80 inches: stratified loamy sand to sand

Properties and qualities

Slope: 0 to 5 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Excessively drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): High to very high (2.00 to 20.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Low (about 4.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: A
Hydric soil rating: No

Minor Components

Atsion

Percent of map unit: 5 percent
Landform: Flats
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Dip, talf
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

Mullica, rarely flooded

Percent of map unit: 5 percent
Landform: Flood plains, depressions, drainageways
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope

Down-slope shape: Linear, concave
Across-slope shape: Linear, concave
Hydric soil rating: Yes

Downer

Percent of map unit: 5 percent
Landform: Knolls, low hills
Landform position (three-dimensional): Interfluve
Down-slope shape: Linear
Across-slope shape: Convex
Hydric soil rating: No

Lakehurst

Percent of map unit: 5 percent
Landform: Flats, depressions
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Linear, concave
Across-slope shape: Linear, concave
Hydric soil rating: No

GamB—Galloway loamy sand, 0 to 5 percent slopes

Map Unit Setting

National map unit symbol: t13b
Elevation: 0 to 130 feet
Mean annual precipitation: 28 to 59 inches
Mean annual air temperature: 46 to 79 degrees F
Frost-free period: 161 to 231 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Galloway and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Galloway

Setting

Landform: Flats, dunes
Landform position (three-dimensional): Riser, dip
Down-slope shape: Linear, convex
Across-slope shape: Linear, convex
Parent material: Unconsolidated sandy marine deposits

Typical profile

A - 0 to 2 inches: loamy sand
E - 2 to 10 inches: loamy sand
Bw1 - 10 to 24 inches: loamy sand
Bw2 - 24 to 36 inches: loamy sand
Cg1 - 36 to 52 inches: sand

Cg2 - 52 to 60 inches: sand

Properties and qualities

Slope: 0 to 5 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Somewhat poorly drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): High to very high (6.00 to 20.00 in/hr)
Depth to water table: About 12 to 18 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Low (about 4.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: A/D
Hydric soil rating: No

Minor Components

Downer

Percent of map unit: 5 percent
Landform: Knolls, low hills
Landform position (three-dimensional): Base slope
Down-slope shape: Convex, linear
Across-slope shape: Linear
Hydric soil rating: No

Mullica, rarely flooded

Percent of map unit: 5 percent
Landform: Flood plains, depressions, drainageways
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Linear, concave
Across-slope shape: Linear, concave
Hydric soil rating: Yes

Atsion

Percent of map unit: 5 percent
Landform: Flats, drainageways
Landform position (two-dimensional): Footslope, toeslope
Landform position (three-dimensional): Base slope, dip, talf
Down-slope shape: Linear
Across-slope shape: Linear, concave
Hydric soil rating: Yes

HbmB—Hammonton loamy sand, 0 to 5 percent slopes

Map Unit Setting

National map unit symbol: t13d
Elevation: 0 to 120 feet
Mean annual precipitation: 28 to 59 inches
Mean annual air temperature: 46 to 79 degrees F
Frost-free period: 161 to 231 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Hammonton and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Hammonton

Setting

Landform: Flats, depressions
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Linear, concave
Across-slope shape: Linear, concave
Parent material: Coarse-loamy fluviomarine deposits

Typical profile

Ap - 0 to 8 inches: loamy sand
E - 8 to 18 inches: loamy sand
Bt - 18 to 36 inches: sandy loam
C - 36 to 80 inches: sand

Properties and qualities

Slope: 0 to 5 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Moderately well drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): High (2.00 to 6.00 in/hr)
Depth to water table: About 18 to 42 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Moderate (about 6.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2w
Hydrologic Soil Group: B
Hydric soil rating: No

Minor Components

Atsion

Percent of map unit: 5 percent
Landform: Depressions
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Mullica, rarely flooded

Percent of map unit: 5 percent
Landform: Flood plains, depressions, drainageways
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Linear, concave
Across-slope shape: Linear, concave
Hydric soil rating: Yes

Fallsington

Percent of map unit: 5 percent
Landform: Flats, depressions
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Linear, concave
Across-slope shape: Linear, concave
Hydric soil rating: Yes

Glassboro

Percent of map unit: 5 percent
Landform: Flats, drainageways
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Linear
Across-slope shape: Linear, concave
Hydric soil rating: No

LakB—Lakehurst sand, 0 to 5 percent slopes

Map Unit Setting

National map unit symbol: t13j
Elevation: 20 to 150 feet
Mean annual precipitation: 28 to 59 inches
Mean annual air temperature: 46 to 79 degrees F
Frost-free period: 161 to 231 days
Farmland classification: Not prime farmland

Map Unit Composition

Lakehurst and similar soils: 85 percent

Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Lakehurst

Setting

Landform: Flats, dunes
Down-slope shape: Linear, convex
Across-slope shape: Linear, convex
Parent material: Sandy fluviomarine deposits

Typical profile

Oi - 0 to 2 inches: slightly decomposed plant material
A - 2 to 4 inches: sand
E - 4 to 18 inches: sand
Bh - 18 to 32 inches: sand
BC - 32 to 45 inches: sand
C - 45 to 54 inches: sand
Cg - 54 to 80 inches: sand

Properties and qualities

Slope: 0 to 5 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Moderately well drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): High to very high (2.00 to 19.98 in/hr)
Depth to water table: About 18 to 42 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Low (about 4.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: A
Hydric soil rating: No

Minor Components

Berryland, rarely flooded

Percent of map unit: 5 percent
Landform: Flats, depressions, drainageways
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Linear, concave
Across-slope shape: Linear, concave
Hydric soil rating: Yes

Quakerbridge

Percent of map unit: 5 percent
Landform: Knolls, flats
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex, linear
Across-slope shape: Linear
Hydric soil rating: No

Atsion, rarely flooded

Percent of map unit: 5 percent
Landform: Flats, depressions
Landform position (two-dimensional): Footslope, toeslope
Landform position (three-dimensional): Base slope, dip, talf
Down-slope shape: Linear, concave
Across-slope shape: Linear, concave
Hydric soil rating: Yes

LasB—Lakewood sand, 0 to 5 percent sand

Map Unit Setting

National map unit symbol: t13k
Elevation: 20 to 150 feet
Mean annual precipitation: 28 to 59 inches
Mean annual air temperature: 46 to 79 degrees F
Frost-free period: 181 to 231 days
Farmland classification: Not prime farmland

Map Unit Composition

Lakewood and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Lakewood

Setting

Landform: Flats, knolls
Landform position (three-dimensional): Interfluve
Down-slope shape: Linear, convex
Across-slope shape: Linear
Parent material: Sandy fluviomarine deposits

Typical profile

A - 0 to 3 inches: sand
E - 3 to 11 inches: sand
Bh - 11 to 13 inches: loamy sand
BC - 13 to 30 inches: sand
C1 - 30 to 46 inches: sand
C2 - 46 to 80 inches: sand

Properties and qualities

Slope: 0 to 5 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Excessively drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): High to very high (6.00 to 20.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None

Frequency of ponding: None
Available water storage in profile: Very low (about 1.3 inches)

Interpretive groups
Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: A
Hydric soil rating: No

Minor Components

Quakerbridge
Percent of map unit: 5 percent
Landform: Knolls, flats
Down-slope shape: Convex, linear
Across-slope shape: Linear
Hydric soil rating: No

Lakehurst
Percent of map unit: 5 percent
Landform: Flats, depressions
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Linear, concave
Across-slope shape: Linear, concave
Hydric soil rating: No

Atsion, rarely flooded
Percent of map unit: 5 percent
Landform: Flats, depressions
Landform position (two-dimensional): Footslope, toeslope
Landform position (three-dimensional): Base slope, dip, talf
Down-slope shape: Linear, concave
Across-slope shape: Linear, concave
Hydric soil rating: Yes

MakAt—Manahawkin muck, 0 to 2 percent slopes, frequently flooded

Map Unit Setting
National map unit symbol: v64g
Elevation: 0 to 140 feet
Mean annual precipitation: 28 to 59 inches
Mean annual air temperature: 46 to 79 degrees F
Frost-free period: 161 to 231 days
Farmland classification: Farmland of unique importance

Map Unit Composition
Manahawkin, frequently flooded, and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Manahawkin, Frequently Flooded

Setting

Landform: Swamps, flood plains
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Organic, woody material over sandy alluvium

Typical profile

Oa1 - 0 to 13 inches: muck
Oa2 - 13 to 26 inches: muck
Oa3 - 26 to 47 inches: muck
Cg - 47 to 80 inches: sand

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Very poorly drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): High to very high (2.00 to 20.00 in/hr)
Depth to water table: About 0 to 6 inches
Frequency of flooding: Frequent
Frequency of ponding: Frequent
Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water storage in profile: Very high (about 17.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7w
Hydrologic Soil Group: A/D
Hydric soil rating: Yes

Minor Components

Berryland, occasionally flooded

Percent of map unit: 5 percent
Landform: Flats, depressions, drainageways
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Linear, concave
Across-slope shape: Linear, concave
Hydric soil rating: Yes

Mullica, rarely flooded

Percent of map unit: 5 percent
Landform: Flood plains, depressions, drainageways
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Linear, concave
Across-slope shape: Linear, concave
Hydric soil rating: Yes

Atsion

Percent of map unit: 5 percent
Landform: Flats

Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Dip, talf
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

MumA—Mullica sandy loam, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: v64h
Elevation: 0 to 120 feet
Mean annual precipitation: 28 to 59 inches
Mean annual air temperature: 46 to 79 degrees F
Frost-free period: 161 to 231 days
Farmland classification: Farmland of statewide importance, if drained

Map Unit Composition

Mullica and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Mullica

Setting

Landform: Flood plains, depressions, drainageways
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Linear, concave
Across-slope shape: Linear, concave
Parent material: Loamy and sandy fluviomarine deposits

Typical profile

Oe - 0 to 2 inches: mucky peat
Ag - 2 to 9 inches: sandy loam
Bg1 - 9 to 14 inches: sandy loam
Bg2 - 14 to 28 inches: sandy loam
Cg1 - 28 to 31 inches: loamy sand
Cg2 - 31 to 40 inches: sand
Cg3 - 40 to 80 inches: gravelly loamy sand

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Very poorly drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 5.95 in/hr)
Depth to water table: About 0 to 6 inches
Frequency of flooding: None
Frequency of ponding: None

Available water storage in profile: Moderate (about 6.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: A/D
Hydric soil rating: Yes

Minor Components

Fallsington

Percent of map unit: 5 percent
Landform: Depressions
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Berryland

Percent of map unit: 5 percent
Landform: Depressions, flats, drainageways
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave, linear
Across-slope shape: Concave
Hydric soil rating: Yes

PHG—Pits, sand and gravel

Map Unit Setting

National map unit symbol: t13q
Mean annual precipitation: 30 to 64 inches
Mean annual air temperature: 46 to 79 degrees F
Frost-free period: 131 to 178 days
Farmland classification: Not prime farmland

Map Unit Composition

Pits, sand and gravel: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Pits, Sand And Gravel

Setting

Parent material: Sandy material disturbed by human activity

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8s
Hydric soil rating: No

WATER—Water

Map Unit Setting

National map unit symbol: t13z
Mean annual precipitation: 30 to 64 inches
Mean annual air temperature: 46 to 79 degrees F
Frost-free period: 131 to 178 days
Farmland classification: Not prime farmland

Map Unit Composition

Water: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

WoeAO—Woodstown sandy loam, 0 to 2 percent slopes, Northern Tidewater Area

Map Unit Setting

National map unit symbol: 2thvr
Elevation: 0 to 110 feet
Mean annual precipitation: 42 to 48 inches
Mean annual air temperature: 52 to 58 degrees F
Frost-free period: 180 to 220 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Woodstown and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Woodstown

Setting

Landform: Fluviomarine terraces, depressions, broad interstream divides, flats
Landform position (two-dimensional): Summit, footslope
Landform position (three-dimensional): Tread, dip, talf
Down-slope shape: Linear, concave
Across-slope shape: Linear, concave
Parent material: Loamy fluviomarine deposits

Typical profile

Ap - 0 to 7 inches: sandy loam
E - 7 to 11 inches: sandy loam
Bt - 11 to 29 inches: sandy loam
BCg - 29 to 45 inches: fine sandy loam
Cg - 45 to 80 inches: loamy sand

Properties and qualities

Slope: 0 to 2 percent

Depth to restrictive feature: More than 80 inches
Natural drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: About 20 to 40 inches
Frequency of flooding: None
Frequency of ponding: None
Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water storage in profile: Moderate (about 8.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2w
Hydrologic Soil Group: C
Hydric soil rating: No

Minor Components

Fallsington

Percent of map unit: 6 percent
Landform: Drainageways, depressions, swales, flats
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Dip, talf
Down-slope shape: Concave, linear
Across-slope shape: Concave, linear
Hydric soil rating: Yes

Hammonton

Percent of map unit: 6 percent
Landform: Flats, depressions, drainageways, broad interstream divides
Landform position (two-dimensional): Summit, footslope
Landform position (three-dimensional): Talf, dip
Down-slope shape: Linear, concave
Across-slope shape: Linear, concave
Hydric soil rating: No

Mattapex

Percent of map unit: 4 percent
Landform: Flats, depressions, swales, broad interstream divides
Landform position (two-dimensional): Summit, footslope
Landform position (three-dimensional): Talf, dip
Down-slope shape: Linear, concave
Across-slope shape: Linear, concave
Hydric soil rating: No

Hambrook

Percent of map unit: 4 percent
Landform: Fluviomarine terraces, flats, depressions
Landform position (two-dimensional): Summit, footslope
Landform position (three-dimensional): Tread, talf, dip
Down-slope shape: Linear, concave
Across-slope shape: Linear, concave
Hydric soil rating: No

Camden County, New Jersey

AtsAO—Atsion sand, 0 to 2 percent slopes, Northern Tidewater Area

Map Unit Setting

National map unit symbol: 2thvz
Elevation: 0 to 230 feet
Mean annual precipitation: 41 to 50 inches
Mean annual air temperature: 46 to 66 degrees F
Frost-free period: 190 to 260 days
Farmland classification: Farmland of unique importance

Map Unit Composition

Atsion and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Atsion

Setting

Landform: Flats, drainageways, depressions, deflation flats
Landform position (two-dimensional): Toeslope, footslope
Landform position (three-dimensional): Talf, dip
Down-slope shape: Linear, concave
Across-slope shape: Linear, concave
Parent material: Sandy eolian deposits and/or fluviomarine deposits

Typical profile

Oi - 0 to 2 inches: peat
A - 2 to 4 inches: sand
E - 4 to 26 inches: sand
Bhs - 26 to 34 inches: sand
Cg - 34 to 80 inches: sand

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to very high (0.71 to 19.98 in/hr)
Depth to water table: About 0 to 12 inches
Frequency of flooding: None
Frequency of ponding: None
Salinity, maximum in profile: Nonsaline (0.0 to 1.0 mmhos/cm)
Available water storage in profile: Low (about 3.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 5w
Hydrologic Soil Group: A/D
Hydric soil rating: Yes

Minor Components

Berryland, occasionally flooded

Percent of map unit: 5 percent

Landform: Deflation flats, flats, depressions, drainageways
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Talf, dip
Down-slope shape: Linear, concave
Across-slope shape: Linear, concave
Hydric soil rating: Yes

Lakehurst

Percent of map unit: 5 percent
Landform: Flats, low hills
Landform position (two-dimensional): Summit, footslope
Landform position (three-dimensional): Talf, rise
Down-slope shape: Linear
Across-slope shape: Linear, convex
Hydric soil rating: No

AveB—Aura-Downer sandy loams, 0 to 5 percent slopes

Map Unit Setting

National map unit symbol: rvp9
Elevation: 10 to 100 feet
Mean annual precipitation: 28 to 59 inches
Mean annual air temperature: 46 to 79 degrees F
Frost-free period: 161 to 231 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Aura and similar soils: 60 percent
Downer and similar soils: 40 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Aura

Setting

Landform: Knolls, low hills
Down-slope shape: Convex, linear
Across-slope shape: Convex
Parent material: Old loamy alluvium and/or old gravelly alluvium

Typical profile

Ap - 0 to 10 inches: sandy loam
Bt1 - 10 to 15 inches: sandy loam
Bt2 - 15 to 24 inches: gravelly sandy loam
2Btx - 24 to 40 inches: sandy clay loam
2C - 40 to 60 inches: sandy loam

Properties and qualities

Slope: 0 to 5 percent
Depth to restrictive feature: 15 to 40 inches to fragipan
Natural drainage class: Well drained
Runoff class: Low

Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.20 to 6.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Low (about 3.2 inches)

Interpretive groups
Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2s
Hydrologic Soil Group: B
Hydric soil rating: No

Description of Downer

Setting
Landform: Low hills
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Loamy fluviomarine deposits and/or gravelly fluviomarine deposits

Typical profile
Ap - 0 to 12 inches: sandy loam
Bt - 12 to 24 inches: sandy loam
BC - 24 to 30 inches: sandy loam
C - 30 to 60 inches: loamy sand

Properties and qualities
Slope: 0 to 5 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): High (2.00 to 6.00 in/hr)
Depth to water table: About 48 to 118 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Low (about 3.3 inches)

Interpretive groups
Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: A
Hydric soil rating: No

BerAr—Berryland sand, 0 to 2 percent slopes, rarely flooded

Map Unit Setting
National map unit symbol: rvpc
Elevation: 0 to 140 feet

Mean annual precipitation: 28 to 59 inches
Mean annual air temperature: 46 to 79 degrees F
Frost-free period: 161 to 231 days
Farmland classification: Farmland of unique importance

Map Unit Composition

Berryland, rarely flooded, and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Berryland, Rarely Flooded

Setting

Landform: Depressions, drainageways, flats
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope, dip
Down-slope shape: Concave, linear
Across-slope shape: Concave, linear
Parent material: Sandy fluviomarine deposits

Typical profile

Ag - 0 to 11 inches: sand
Bh - 11 to 19 inches: sand
Bg - 19 to 32 inches: sand
B'h - 32 to 40 inches: sand
Cg1 - 40 to 44 inches: sand
Cg2 - 44 to 80 inches: stratified sand to sandy loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Very poorly drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): High to very high (2.00 to 20.00 in/hr)
Depth to water table: About 0 to 6 inches
Frequency of flooding: Rare
Frequency of ponding: Rare
Available water storage in profile: Low (about 3.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 5w
Hydrologic Soil Group: A/D
Hydric soil rating: Yes

Minor Components

Atsion

Percent of map unit: 5 percent
Landform: Flats
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Talf, dip
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

Mullica, rarely flooded

Percent of map unit: 5 percent
Landform: Flood plains, depressions, drainageways
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Linear, concave
Across-slope shape: Linear, concave
Hydric soil rating: Yes

Manahawkin, frequently flooded

Percent of map unit: 5 percent
Landform: Swamps, flood plains
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

DocBO—Downer loamy sand, 0 to 5 percent slopes, Northern Tidewater Area

Map Unit Setting

National map unit symbol: 2thw1
Elevation: 60 to 90 feet
Mean annual precipitation: 41 to 50 inches
Mean annual air temperature: 46 to 66 degrees F
Frost-free period: 190 to 260 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Downer and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Downer

Setting

Landform: Knolls, low hills
Landform position (two-dimensional): Summit, shoulder
Landform position (three-dimensional): Interfluve, rise
Down-slope shape: Convex, linear
Across-slope shape: Linear
Parent material: Loamy fluviomarine deposits

Typical profile

Ap - 0 to 10 inches: loamy sand
BE - 10 to 16 inches: loamy sand
Bt - 16 to 28 inches: sandy loam
C1 - 28 to 48 inches: loamy sand
C2 - 48 to 80 inches: sand

Properties and qualities

Slope: 0 to 5 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 6.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Salinity, maximum in profile: Nonsaline (0.0 to 0.2 mmhos/cm)
Available water storage in profile: Moderate (about 6.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: A
Hydric soil rating: No

Minor Components

Hammonton

Percent of map unit: 10 percent
Landform: Broad interstream divides, flats
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Dip
Down-slope shape: Convex
Across-slope shape: Linear
Hydric soil rating: No

Atsion

Percent of map unit: 5 percent
Landform: Drainageways, deflation flats, flats, depressions
Landform position (two-dimensional): Footslope, toeslope
Landform position (three-dimensional): Dip, talf
Down-slope shape: Concave, linear
Across-slope shape: Linear
Hydric soil rating: Yes

Evesboro

Percent of map unit: 5 percent
Landform: Knolls, fluviomarine terraces, dunes, flats
Landform position (three-dimensional): Riser, rise
Down-slope shape: Convex, linear
Across-slope shape: Convex, linear
Hydric soil rating: No

DoeAO—Downer sandy loam, 0 to 2 percent slopes, Northern Tidewater Area

Map Unit Setting

National map unit symbol: 2thwd
Elevation: 0 to 190 feet
Mean annual precipitation: 41 to 50 inches
Mean annual air temperature: 46 to 64 degrees F
Frost-free period: 190 to 250 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Downer and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Downer

Setting

Landform: Knolls, low hills, flats
Landform position (two-dimensional): Summit, shoulder
Landform position (three-dimensional): Interfluve, rise
Down-slope shape: Convex, linear
Across-slope shape: Linear
Parent material: Loamy fluviomarine deposits

Typical profile

Ap - 0 to 10 inches: sandy loam
BE - 10 to 16 inches: loamy sand
Bt - 16 to 28 inches: sandy loam
C1 - 28 to 48 inches: loamy sand
C2 - 48 to 80 inches: sand

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 6.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water storage in profile: Moderate (about 6.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 1
Hydrologic Soil Group: A

Hydric soil rating: No

Minor Components

Galestown

Percent of map unit: 10 percent
Landform: Flats
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Rise
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Ingleside

Percent of map unit: 5 percent
Landform: Flats
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Rise
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Hammonton

Percent of map unit: 5 percent
Landform: Flats, broad interstream divides
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Talf
Down-slope shape: Linear, convex
Across-slope shape: Linear
Hydric soil rating: No

DoeBO—Downer sandy loam, 2 to 5 percent slopes, Northern Tidewater Area

Map Unit Setting

National map unit symbol: 2thwh
Elevation: 0 to 210 feet
Mean annual precipitation: 41 to 50 inches
Mean annual air temperature: 46 to 64 degrees F
Frost-free period: 190 to 260 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Downer and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Downer

Setting

Landform: Low hills, knolls, flats

Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Nose slope, rise
Down-slope shape: Linear, convex
Across-slope shape: Linear, convex
Parent material: Loamy fluviomarine deposits

Typical profile

Ap - 0 to 10 inches: sandy loam
BE - 10 to 16 inches: loamy sand
Bt - 16 to 28 inches: sandy loam
C1 - 28 to 48 inches: loamy sand
C2 - 48 to 80 inches: sand

Properties and qualities

Slope: 2 to 5 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 6.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water storage in profile: Moderate (about 6.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: A
Hydric soil rating: No

Minor Components

Galestown

Percent of map unit: 10 percent
Landform: Broad interstream divides, flats
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Rise
Down-slope shape: Linear
Across-slope shape: Convex
Hydric soil rating: No

Ingleside

Percent of map unit: 5 percent
Landform: Low hills, flats
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Nose slope, rise
Down-slope shape: Linear
Across-slope shape: Convex
Hydric soil rating: No

Hammonton

Percent of map unit: 5 percent
Landform: Broad interstream divides, flats
Landform position (two-dimensional): Shoulder, footslope
Landform position (three-dimensional): Dip

Down-slope shape: Convex
Across-slope shape: Linear
Hydric soil rating: No

EveB—Evesboro sand, 0 to 5 percent slopes

Map Unit Setting

National map unit symbol: rvpq
Elevation: 0 to 150 feet
Mean annual precipitation: 28 to 59 inches
Mean annual air temperature: 46 to 79 degrees F
Frost-free period: 161 to 231 days
Farmland classification: Farmland of local importance

Map Unit Composition

Evesboro and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Evesboro

Setting

Landform: Low hills
Landform position (three-dimensional): Interfluve, side slope
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Sandy eolian deposits and/or sandy fluviomarine deposits

Typical profile

A - 0 to 4 inches: sand
AB - 4 to 17 inches: sand
Bw - 17 to 31 inches: sand
C - 31 to 80 inches: stratified loamy sand to sand

Properties and qualities

Slope: 0 to 5 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Excessively drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): High to very high (2.00 to 20.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Low (about 4.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: A
Hydric soil rating: No

Minor Components

Atsion

Percent of map unit: 5 percent
Landform: Flats
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Dip, talf
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

Mullica, rarely flooded

Percent of map unit: 5 percent
Landform: Flood plains, depressions, drainageways
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Linear, concave
Across-slope shape: Linear, concave
Hydric soil rating: Yes

Downer

Percent of map unit: 5 percent
Landform: Low hills, knolls
Landform position (three-dimensional): Interfluve
Down-slope shape: Linear
Across-slope shape: Convex
Hydric soil rating: No

Lakehurst

Percent of map unit: 5 percent
Landform: Flats, depressions
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Linear, concave
Across-slope shape: Linear, concave
Hydric soil rating: No

EvewB—Evesboro water table variant sand, 0 to 5 percent slopes

Map Unit Setting

National map unit symbol: x9r7
Elevation: 0 to 150 feet
Mean annual precipitation: 28 to 59 inches
Mean annual air temperature: 46 to 79 degrees F
Frost-free period: 161 to 231 days
Farmland classification: Farmland of local importance

Map Unit Composition

Evesboro, water table, and similar soils: 80 percent
Minor components: 20 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Evesboro, Water Table

Setting

Landform: Low hills
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Sandy eolian sands

Typical profile

Ap - 0 to 10 inches: sand
C1 - 10 to 30 inches: sand
C2 - 30 to 60 inches: sand

Properties and qualities

Slope: 0 to 5 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Moderately well drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): High to very high (6.00 to 20.00 in/hr)
Depth to water table: About 18 to 42 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Low (about 3.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: A
Hydric soil rating: No

Minor Components

Aura

Percent of map unit: 5 percent
Landform: Low hills
Landform position (three-dimensional): Crest
Down-slope shape: Convex
Across-slope shape: Linear
Hydric soil rating: No

Woodstown

Percent of map unit: 5 percent
Landform: Drainageways
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Linear
Across-slope shape: Concave
Hydric soil rating: No

Fallsington

Percent of map unit: 5 percent
Landform: Flats
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

Downer

Percent of map unit: 5 percent
Landform: Knolls, low hills
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex, linear
Across-slope shape: Linear
Hydric soil rating: No

GamB—Galloway loamy sand, 0 to 5 percent slopes

Map Unit Setting

National map unit symbol: rvq6
Elevation: 0 to 130 feet
Mean annual precipitation: 28 to 59 inches
Mean annual air temperature: 46 to 79 degrees F
Frost-free period: 161 to 231 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Galloway and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Galloway

Setting

Landform: Dunes, flats
Landform position (three-dimensional): Riser, dip
Down-slope shape: Convex, linear
Across-slope shape: Convex, linear
Parent material: Unconsolidated sandy marine deposits

Typical profile

A - 0 to 2 inches: loamy sand
E - 2 to 10 inches: loamy sand
Bw1 - 10 to 24 inches: loamy sand
Bw2 - 24 to 36 inches: loamy sand
Cg1 - 36 to 52 inches: sand
Cg2 - 52 to 60 inches: sand

Properties and qualities

Slope: 0 to 5 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Somewhat poorly drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): High to very high (6.00 to 20.00 in/hr)
Depth to water table: About 12 to 18 inches
Frequency of flooding: None
Frequency of ponding: None

Available water storage in profile: Low (about 4.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: A/D
Hydric soil rating: No

Minor Components

Downer

Percent of map unit: 5 percent
Landform: Knolls, low hills
Landform position (three-dimensional): Base slope
Down-slope shape: Convex, linear
Across-slope shape: Linear
Hydric soil rating: No

Mullica, rarely flooded

Percent of map unit: 5 percent
Landform: Drainageways, flood plains, depressions
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Linear, concave
Across-slope shape: Concave, linear
Hydric soil rating: Yes

Atsion

Percent of map unit: 5 percent
Landform: Flats, drainageways
Landform position (two-dimensional): Toeslope, footslope
Landform position (three-dimensional): Base slope, dip, talf
Down-slope shape: Linear
Across-slope shape: Linear, concave
Hydric soil rating: Yes

LanB—Lakehurst-Lakewood sands, 0 to 5 percent slopes

Map Unit Setting

National map unit symbol: rvqh
Mean annual precipitation: 28 to 59 inches
Mean annual air temperature: 46 to 79 degrees F
Frost-free period: 161 to 231 days
Farmland classification: Not prime farmland

Map Unit Composition

Lakehurst and similar soils: 60 percent
Lakewood and similar soils: 40 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Lakehurst

Setting

Landform: Dunes, flats
Down-slope shape: Convex, linear
Across-slope shape: Linear
Parent material: Sandy fluviomarine deposits

Typical profile

A - 0 to 3 inches: sand
E - 3 to 12 inches: sand
Bh - 12 to 18 inches: sand
Bw - 18 to 40 inches: sand
C - 40 to 60 inches: sand

Properties and qualities

Slope: 0 to 5 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Moderately well drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): High to very high (6.00 to 20.00 in/hr)
Depth to water table: About 18 to 42 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Low (about 4.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: A
Hydric soil rating: No

Description of Lakewood

Setting

Landform: Dunes, flats
Down-slope shape: Convex, linear
Across-slope shape: Linear
Parent material: Sandy fluviomarine deposits

Typical profile

E - 0 to 10 inches: sand
B - 10 to 14 inches: sand
BC - 14 to 20 inches: sand
C - 20 to 60 inches: sand

Properties and qualities

Slope: 0 to 5 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Excessively drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): High to very high (6.00 to 20.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None

Available water storage in profile: Very low (about 1.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: A
Hydric soil rating: No

LasB—Lakewood sand, 0 to 5 percent slopes

Map Unit Setting

National map unit symbol: rvqj
Elevation: 20 to 150 feet
Mean annual precipitation: 28 to 59 inches
Mean annual air temperature: 46 to 79 degrees F
Frost-free period: 161 to 231 days
Farmland classification: Not prime farmland

Map Unit Composition

Lakewood and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Lakewood

Setting

Landform: Flats, knolls
Landform position (three-dimensional): Interfluve
Down-slope shape: Linear, convex
Across-slope shape: Linear
Parent material: Sandy fluviomarine deposits

Typical profile

A - 0 to 3 inches: sand
E - 3 to 11 inches: sand
Bh - 11 to 13 inches: loamy sand
BC - 13 to 30 inches: sand
C1 - 30 to 46 inches: sand
C2 - 46 to 80 inches: sand

Properties and qualities

Slope: 0 to 5 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Excessively drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): High to very high (6.00 to 20.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Very low (about 1.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: A
Hydric soil rating: No

Minor Components

Quakerbridge

Percent of map unit: 5 percent
Landform: Flats, knolls
Down-slope shape: Linear, convex
Across-slope shape: Linear
Hydric soil rating: No

Lakehurst

Percent of map unit: 5 percent
Landform: Flats, depressions
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Linear, concave
Across-slope shape: Linear, concave
Hydric soil rating: No

Atsion, rarely flooded

Percent of map unit: 5 percent
Landform: Depressions, flats
Landform position (two-dimensional): Toeslope, footslope
Landform position (three-dimensional): Base slope, dip, talf
Down-slope shape: Concave, linear
Across-slope shape: Concave, linear
Hydric soil rating: Yes

LasC—Lakewood sand, 5 to 10 percent slopes

Map Unit Setting

National map unit symbol: rvqk
Elevation: 10 to 150 feet
Mean annual precipitation: 28 to 59 inches
Mean annual air temperature: 46 to 79 degrees F
Frost-free period: 161 to 231 days
Farmland classification: Not prime farmland

Map Unit Composition

Lakewood and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Lakewood

Setting

Landform: Marine terraces
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Sandy fluviomarine deposits

Typical profile

A - 0 to 2 inches: sand
E - 2 to 11 inches: sand
Bh - 11 to 13 inches: loamy sand
BC - 13 to 28 inches: sand
C - 28 to 60 inches: sand

Properties and qualities

Slope: 5 to 10 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Excessively drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): High to very high (6.00 to 20.00 in/hr)
Depth to water table: About 48 to 122 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Very low (about 1.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: A
Hydric soil rating: No

Minor Components

Lakehurst

Percent of map unit: 5 percent
Landform: Flats, dunes
Down-slope shape: Linear, convex
Across-slope shape: Linear, convex
Hydric soil rating: No

Atsion, rarely flooded

Percent of map unit: 5 percent
Landform: Flats, depressions
Landform position (two-dimensional): Toeslope, footslope
Landform position (three-dimensional): Base slope, dip, talf
Down-slope shape: Linear, concave
Across-slope shape: Linear, concave
Hydric soil rating: Yes

Evesboro

Percent of map unit: 5 percent
Landform: Low hills
Landform position (three-dimensional): Interfluve, side slope
Down-slope shape: Convex
Across-slope shape: Linear

Hydric soil rating: No

MakAt—Manahawkin muck, 0 to 2 percent slopes, frequently flooded

Map Unit Setting

National map unit symbol: rvqq
Elevation: 0 to 140 feet
Mean annual precipitation: 28 to 59 inches
Mean annual air temperature: 46 to 79 degrees F
Frost-free period: 161 to 231 days
Farmland classification: Farmland of unique importance

Map Unit Composition

Manahawkin, frequently flooded, and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Manahawkin, Frequently Flooded

Setting

Landform: Swamps, flood plains
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Organic, woody material over sandy alluvium

Typical profile

Oa1 - 0 to 13 inches: muck
Oa2 - 13 to 26 inches: muck
Oa3 - 26 to 47 inches: muck
Cg - 47 to 80 inches: sand

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Very poorly drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): High to very high (2.00 to 20.00 in/hr)
Depth to water table: About 0 to 6 inches
Frequency of flooding: Frequent
Frequency of ponding: Frequent
Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water storage in profile: Very high (about 17.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7w
Hydrologic Soil Group: A/D
Hydric soil rating: Yes

Minor Components

Berryland, occasionally flooded
Percent of map unit: 5 percent
Landform: Depressions, drainageways, flats
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave, linear
Across-slope shape: Concave, linear
Hydric soil rating: Yes

Mullica, rarely flooded
Percent of map unit: 5 percent
Landform: Depressions, drainageways, flood plains
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave, linear
Across-slope shape: Concave, linear
Hydric soil rating: Yes

Atsion
Percent of map unit: 5 percent
Landform: Flats
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Dip, talf
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

MumA—Mullica sandy loam, 0 to 2 percent slopes

Map Unit Setting
National map unit symbol: rvr1
Elevation: 0 to 120 feet
Mean annual precipitation: 28 to 59 inches
Mean annual air temperature: 46 to 79 degrees F
Frost-free period: 161 to 231 days
Farmland classification: Farmland of statewide importance, if drained

Map Unit Composition
Mullica and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Mullica

Setting
Landform: Flood plains, depressions, drainageways
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope

Down-slope shape: Linear, concave
Across-slope shape: Linear, concave
Parent material: Loamy and sandy fluviomarine deposits

Typical profile

Oe - 0 to 2 inches: mucky peat
Ag - 2 to 9 inches: sandy loam
Bg1 - 9 to 14 inches: sandy loam
Bg2 - 14 to 28 inches: sandy loam
Cg1 - 28 to 31 inches: loamy sand
Cg2 - 31 to 40 inches: sand
Cg3 - 40 to 80 inches: gravelly loamy sand

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Very poorly drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 5.95 in/hr)
Depth to water table: About 0 to 6 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Moderate (about 6.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: A/D
Hydric soil rating: Yes

Minor Components

Fallsington

Percent of map unit: 5 percent
Landform: Depressions
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Berryland

Percent of map unit: 5 percent
Landform: Depressions, flats, drainageways
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave, linear
Across-slope shape: Concave
Hydric soil rating: Yes

PHG—Pits, sand and gravel

Map Unit Setting

National map unit symbol: rvr6
Mean annual precipitation: 30 to 64 inches
Mean annual air temperature: 46 to 79 degrees F
Frost-free period: 131 to 178 days
Farmland classification: Not prime farmland

Map Unit Composition

Pits, sand and gravel: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Pits, Sand And Gravel

Setting

Parent material: Sandy material disturbed by human activity

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8s
Hydric soil rating: No

WATER—Water

Map Unit Setting

National map unit symbol: rvrh
Mean annual precipitation: 30 to 64 inches
Mean annual air temperature: 46 to 79 degrees F
Frost-free period: 131 to 178 days
Farmland classification: Not prime farmland

Map Unit Composition

Water: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

WebA—Weeksville fine sandy loam, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: v3bm
Elevation: 30 to 150 feet
Mean annual precipitation: 28 to 59 inches

Mean annual air temperature: 46 to 79 degrees F
Frost-free period: 161 to 231 days
Farmland classification: Farmland of statewide importance, if drained

Map Unit Composition

Weeksville and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Weeksville

Setting

Landform: Marine terraces
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Loamy marine deposits

Typical profile

Ap - 0 to 12 inches: fine sandy loam
Btg - 12 to 32 inches: very fine sandy loam
Cg - 32 to 60 inches: stratified loamy fine sand to fine sandy loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Very poorly drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: About 0 to 12 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Moderate (about 7.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6w
Hydrologic Soil Group: B/D
Hydric soil rating: Yes

Minor Components

Buddtown

Percent of map unit: 5 percent
Landform: Flats
Landform position (three-dimensional): Rise
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Deptford

Percent of map unit: 5 percent
Landform: Flats
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Jade run

Percent of map unit: 5 percent
Landform: Flats, depressions
Landform position (three-dimensional): Dip
Down-slope shape: Linear, concave
Across-slope shape: Linear, concave
Hydric soil rating: Yes

WoeAO—Woodstown sandy loam, 0 to 2 percent slopes, Northern Tidewater Area

Map Unit Setting

National map unit symbol: 2thvr
Elevation: 0 to 110 feet
Mean annual precipitation: 42 to 48 inches
Mean annual air temperature: 52 to 58 degrees F
Frost-free period: 180 to 220 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Woodstown and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Woodstown

Setting

Landform: Broad interstream divides, flats, fluviomarine terraces, depressions
Landform position (two-dimensional): Summit, footslope
Landform position (three-dimensional): Tread, talf, dip
Down-slope shape: Linear, concave
Across-slope shape: Linear, concave
Parent material: Loamy fluviomarine deposits

Typical profile

Ap - 0 to 7 inches: sandy loam
E - 7 to 11 inches: sandy loam
Bt - 11 to 29 inches: sandy loam
BCg - 29 to 45 inches: fine sandy loam
Cg - 45 to 80 inches: loamy sand

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: About 20 to 40 inches
Frequency of flooding: None
Frequency of ponding: None

Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water storage in profile: Moderate (about 8.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2w
Hydrologic Soil Group: C
Hydric soil rating: No

Minor Components

Fallsington

Percent of map unit: 6 percent
Landform: Flats, drainageways, depressions, swales
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Talf, dip
Down-slope shape: Linear, concave
Across-slope shape: Linear, concave
Hydric soil rating: Yes

Hammonton

Percent of map unit: 6 percent
Landform: Depressions, drainageways, broad interstream divides, flats
Landform position (two-dimensional): Footslope, summit
Landform position (three-dimensional): Dip, talf
Down-slope shape: Concave, linear
Across-slope shape: Concave, linear
Hydric soil rating: No

Mattapex

Percent of map unit: 4 percent
Landform: Broad interstream divides, flats, depressions, swales
Landform position (two-dimensional): Summit, footslope
Landform position (three-dimensional): Talf, dip
Down-slope shape: Linear, concave
Across-slope shape: Linear, concave
Hydric soil rating: No

Hambrook

Percent of map unit: 4 percent
Landform: Flats, depressions, fluviomarine terraces
Landform position (two-dimensional): Summit, footslope
Landform position (three-dimensional): Tread, talf, dip
Down-slope shape: Linear, concave
Across-slope shape: Linear, concave
Hydric soil rating: No

WokA—Woodstown and Glassboro sandy loams, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: rx83
Elevation: 0 to 150 feet
Mean annual precipitation: 28 to 59 inches
Mean annual air temperature: 46 to 79 degrees F
Frost-free period: 161 to 231 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Woodstown and similar soils: 70 percent
Glassboro and similar soils: 15 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Woodstown

Setting

Landform: Flats
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Old alluvium and/or sandy marine deposits

Typical profile

Ap - 0 to 8 inches: sandy loam
Bt1 - 8 to 26 inches: sandy loam
Bt2 - 26 to 30 inches: sandy clay loam
Bt3 - 30 to 36 inches: sandy loam
C - 36 to 80 inches: loamy sand

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Moderately well drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.20 to 2.00 in/hr)
Depth to water table: About 18 to 42 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Low (about 5.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2w
Hydrologic Soil Group: B
Hydric soil rating: No

Description of Glassboro

Setting

Landform: Drainageways
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Linear
Across-slope shape: Concave
Parent material: Loamy fluviomarine deposits

Typical profile

Ap - 0 to 11 inches: sandy loam
Bt1 - 11 to 16 inches: sandy loam
Bt2 - 16 to 21 inches: coarse sandy loam
Btg - 21 to 26 inches: coarse sandy loam
Cg - 26 to 40 inches: loamy coarse sand
C1 - 40 to 56 inches: coarse sand
C2 - 56 to 80 inches: gravelly coarse sand

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Somewhat poorly drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 6.00 in/hr)
Depth to water table: About 12 to 18 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Low (about 5.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: A/D
Hydric soil rating: No

Minor Components

Fallsington

Percent of map unit: 5 percent
Landform: Depressions
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Downer

Percent of map unit: 5 percent
Landform: Low hills
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Mullica

Percent of map unit: 5 percent

Landform: Depressions, drainageways, flood plains
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave, linear
Across-slope shape: Concave, linear
Hydric soil rating: Yes

WOUB—Woodstown and Galloway loamy sands, 0 to 5 percent slopes

Map Unit Setting

National map unit symbol: rx86
Elevation: 10 to 120 feet
Mean annual precipitation: 28 to 59 inches
Mean annual air temperature: 46 to 79 degrees F
Frost-free period: 161 to 231 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Woodstown and similar soils: 50 percent
Galloway and similar soils: 40 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Woodstown

Setting

Landform: Low hills
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Old alluvium and/or sandy marine deposits

Typical profile

Ap - 0 to 9 inches: sandy loam
E - 9 to 14 inches: sandy loam
BE - 14 to 23 inches: sandy loam
Bt - 23 to 32 inches: sandy loam
C - 32 to 60 inches: stratified sand to loamy sand

Properties and qualities

Slope: 0 to 5 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Moderately well drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 6.00 in/hr)
Depth to water table: About 18 to 42 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Moderate (about 6.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2w
Hydrologic Soil Group: B
Hydric soil rating: No

Description of Galloway

Setting

Landform: Dunes
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Unconsolidated sandy marine deposits

Typical profile

Ap - 0 to 10 inches: loamy sand
C1 - 10 to 16 inches: sand
C2 - 16 to 30 inches: sand
C3 - 30 to 60 inches: sand

Properties and qualities

Slope: 0 to 5 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Moderately well drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): High to very high (6.00 to 20.00 in/hr)
Depth to water table: About 18 to 42 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Low (about 3.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: A
Hydric soil rating: No

Minor Components

Atsion

Percent of map unit: 10 percent
Landform: Flats, drainageways
Landform position (two-dimensional): Toeslope, footslope
Landform position (three-dimensional): Base slope, dip, talf
Down-slope shape: Linear
Across-slope shape: Linear, concave
Hydric soil rating: Yes

From: Moeder, Amy
To: Fouty, Amy
Cc: Ianni, Gregory
Subject: RE: Tuckahoe estimate sod
Date: Wednesday, October 24, 2018 6:26:20 PM
Attachments: image001.png

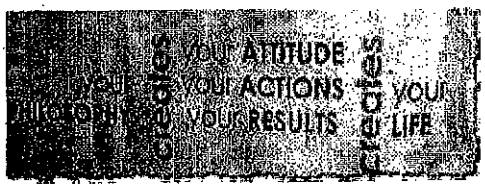
Thanks, Amy. Yes...we will need a sole source and the sub account should be [redacted] with a sub object of [redacted]

Amy

From: Fouty, Amy
Sent: Wednesday, October 24, 2018 2:15 PM
To: Moeder, Amy [redacted]
Cc: Ianni, Gregory [redacted]
Subject: FW: Tuckahoe estimate sod

Amy, attached is the estimate for sod for the stadium field for next week's work.
Sod is scheduled to be cut Oct 31st and arrive here Nov 1st for install.
Let me know if there are further question. I assume you will need a sole source letter.
I will also have all campus expenses charged to XA[redacted]Spartan stadium. Do you have a subaccount you want labeled?
Thank you,

Amy J. Fouty, CSFM
Assistant Athletic Director
Michigan State University
223 Kalamazoo Street, RM 228
Jenison Field House
East Lansing, MI 48824-1025
Office- 517-884-6716
Cell- 517-490-1729
Fax- 517-432-1047
Email-[redacted]



From: Chris <clund@ttfarms.com>

Sent: Wednesday, October 24, 2018 1:49 PM
To: Fouty, Amy <[redacted]
Subject:

This E-mail was sent from "RNPE5A2A3" (MP C2800/LD528C).

Scan Date: 10.24.2018 13:45:22 (-0400)

From: Fouty, Amy
To: Allen Carter
Subject: Re: trip to Tuckahoe
Date: Tuesday, October 23, 2018 12:01:00 PM

Thank you for your time yesterday it was wonderful to see the farm that you and your family have created. I will be needing sod next week and an install. I will get you some square footage this afternoon trying to work on some things on my end. Talk to you soon.
A

Sent from my Verizon, Samsung Galaxy smartphone

-------- Original message --------
From: Allen Carter <acarter@ttfarms.com>
Date: 10/17/18 11:19 AM (GMT-05:00)
To: "Fouty, Amy" [redacted]
Subject: RE: trip to Tuckahoe

So we normally order in, and you will be here in time that we can add you all to that order if you like. Or I can recommend some nice places in town. We can discuss that on Monday.

Yes we can ship the soil out for you, we can also do that while you are here.
And yes, we have soil probe that can be used.

From: Fouty, Amy [redacted]
Sent: Wednesday, October 17, 2018 10:59 AM
To: Allen Carter <acarter@ttfarms.com>
Subject: RE: trip to Tuckahoe

Just a couple quick questions, requests.
Is there a place in town you can join us for lunch either before or after we walk the farm?
Can I have you ship the soil samples back to MSU for me? I am happy to provide my cc if you invoice me after.
Can I borrow a soil probe to sample?
The airlines is strict on what I can carry on. Lol
Thanks,
A

From: Allen Carter <acarter@ttfarms.com>
Sent: Wednesday, October 17, 2018 9:53 AM
To: Fouty, Amy [redacted]
Subject: RE: trip to tuckahoe

Thank you. See you on Monday.

From: Fouty, Amy [redacted]

Sent: Wednesday, October 17, 2018 9:34 AM
To: Allen Carter <acarter@ttfarms.com>
Subject: RE: trip to tuckahoe

Looking to install May 2019 roughly 75,000 ft sq.

From: Allen Carter [mailto:acarter@ttfarms.com]
Sent: Wednesday, October 17, 2018 9:29 AM
To: Fouty, Amy
Subject: RE: trip to tuckahoe

Amy,

Could you also refresh me on dome of the details:
I believe that this was for Fall 2019, the football stadium and about how many square feet?
Thank You

Allen Carter
Business Administrator, Tuckahoe Turf Farms, Inc
609-561-7184 | acarter@ttfarms.com
www.ttfarms.com
PO Box 148, Hammonton, NJ 08037

"Agriculture is our wisest pursuit, because it will in the end contribute the most to real wealth, good morals , and happiness" -- *Letter from Thomas Jefferson to George Washington 1787*

From: Fouty, Amy [redacted]
Sent: Wednesday, October 17, 2018 8:33 AM
To: Allen Carter <acarter@ttfarms.com>
Subject: trip to tuckahoe

Allen,
Good morning.
Myself, Dr. Rogers, Dr. Crum, and Brian Storm have scheduled a trip out for next week Monday to get some soil samples and look at plots on the farm that would be suitable for our application in Spartan stadium.
We are looking for a an area of your KBG blend for Spartan stadium. We would like a consistently sandy location that we can keep for 6-8 years with no layering issues.
I have attached our itinerary for your review.
A

From: ANTHONY TRAVEL [mailto:confirmation@tripcase.com]
Sent: Wednesday, October 3, 2018 7:44 PM

To: Fouty, Amy
Subject: eInvoice, October 22 for AMY JENNIFER FOUTY

ANTHONY TRAVEL

eInvoice

Add to Calendar

Itinerary & Documents

A Message from your Travel Arranger

Thank you for using Anthony Travel.

Sales Person:	A2	Invoice Issue Date:	03 Oct 2018
Invoice Number:	3452082	Record Locator:	YMUYVM

DELTA AIR LINES INC DL 743 — **Monday, 22 October**

From: DETROIT METRO, MI
7:10am
Departure Terminal: EM

To: PHILADELPHIA, PA
8:57am
Arrival Terminal: D

Class: Economy
Meal:
Type: MCDONNELL DOUGLAS MD-90 JET

Duration: 1hr(s) 47min(s)
Stop(s): Non Stop

FOUTY/AMY JENNIFER
Seat(s): 18A

CRUM/JAMES ROBERT
Seat(s): 18C
DL [redacted]

ROGERS/JOHN N
Seat(s): 18B
DL [redacted]

NATIONAL CAR — **Monday, 22 October 2018**

Pick Up: 8:57am **Drop Off:** 5:28pm

Confirmation Number: 1274215792COUNT Car Type: 2/4 Door, Standard
CD: XZ[redacted]

Service Information CIC132516 Phone

Rate Plan For	1 Days, 0 Hours	USD	MI/KM	Extra MI/KM
	USD Rate	40.00	mileageAllowance	0.00
	Extra Day	40.00	UNL	0.00
	Extra Hour	17.00	UNL	0.00
	Mandatory Charges	19.78		
	Approximate Total Price	59.78	UNL	

DELTA AIR LINES INC DL 974 — **Monday, 22 October**

From: PHILADELPHIA, PA
5:28pm
Departure Terminal: D

To: DETROIT METRO, MI
7:04pm
Arrival Terminal: EM

Class: Economy
Meal:
Type: MCDONNELL DOUGLAS MD-90 JET

Duration: 1hr(s) 36min(s)
Stop(s): Non Stop

FOUTY/AMY JENNIFER
Seat(s): 20A

ROGERS/JOHN N
Seat(s): 20B
[redacted]

CRUM/JAMES ROBERT
Seat(s): 20C
[redacted]

OTHERS — **Saturday, 20 April 2019**
LANSING
HAVE A NICE TRIP...GO GREEN

Ticket Information

Ticket Number:	DL 7212697795	**Passenger:**	FOUTY AMY JENNIFER		
		Billed to:	[redacted]	USD	* 583.29
Ticket Number:	DL 7212697796	**Passenger:**	ROGERS JOHN N		
		Billed to:	[redacted]	USD	* 583.29
Ticket Number:	DL 7212697797	**Passenger:**	CRUM JAMES ROBERT		
		Billed to:	[redacted]	USD	* 583.29

SubTotal:	USD	**1749.87**
Net Credit Card Billing:	* USD	**1749.87**
TOTAL AMOUNT DUE:	USD	**0.00**

From: Schager, Paul
To: Brown, Wendy
Cc: Ianni, Gregory; Phlegar, Benjamin; Larson, Matthew; Beekman, William; Sleeper, Charles; Atkinson, Rick; [redacted]; Donatelli, Jim; Hoch, Bryan; Fouty, Amy; Kesler, Seth
Subject: Ticket Office Response
Date: Monday, October 22, 2018 9:43:42 AM

Ticket Office Response 10/22/18 (Please share any additional information that may be helpful to communicate to our fans.)

In preparation for a weather emergency, Michigan State University Public Safety called for the stop of play and the evacuation of Spartan Stadium. Once the evacuation order was made, no additional patrons were permitted entry into the stadium. Play was stopped and fans who were already inside the stadium were required to exit. Fans waiting to enter, were required to clear gate areas. This was necessary to allow for the safe evacuation of fans already inside. Once the weather emergency was lifted, all patrons were allowed to enter or reenter the stadium. The safety of all spectators is our number one concern. We apologize for any inconvenience that fans experienced as a result of the mandatory evacuation of Spartan Stadium.

Paul Schager
Executive Associate Athletics Director
Michigan State University Athletics
1855 Place
550 S. Harrison Road 4040H
East Lansing, MI 48823
O 517-432-4299
M 517-242-5301

From:	Rogers, John
To:	Fouty, Amy
Cc:	Donley, Christina
Subject:	Tuckahoe Sod Farm trip
Date:	Tuesday, October 23, 2018 4:53:37 AM
Attachments:	FOLIODETE_20181021013903.pdf Parking Oct 22.pdf

Amy,

Here are my receipts. Also include mileage from EL to DTW. Thank you. Good trip yesterday.

TR

Dr. John N. Rogers, III (Trey)
Professor, Turfgrass Science & Management
Department of Plant, Soil, and Microbial Sciences
Michigan State University
1066 Bogue Street, Room 160
East Lansing, MI

517-353-0136 (office)
[redacted] (cell)
[redacted]
@msuturfdoc
http://www.psm.msu.edu/people/john_trey_rogers

EMBASSY SUITES DETROIT
8600 WICKHAM ROAD
ROMULUS, MI 48174
United States of America
TELEPHONE 734-728-9200 • FAX 734-728-9278
Reservations
www.hilton.com or 1 800 HILTONS

ROGERS, JOHN

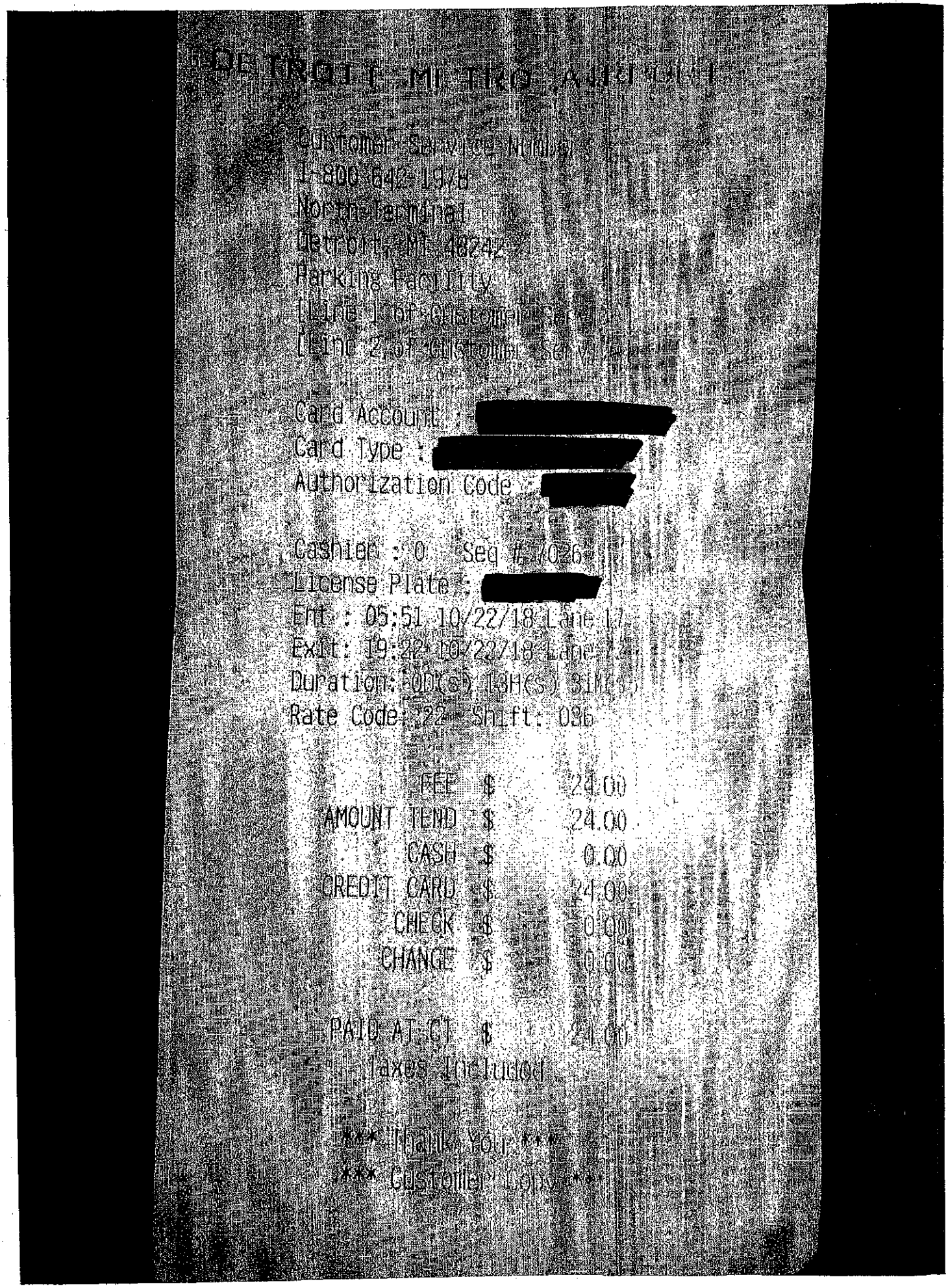
[redacted]

Room No:	114/KNGN
Arrival Date:	10/21/2018 2:55:00 PM
Departure Date:	10/22/2018
Adult/Child:	1/0
Cashier ID:	TAT
Room Rate:	131.00
AL:	DL 2667015099
HH #	[redacted]
VAT #	
Folio No/Che	435116 A

Confirmation Number: 91864058

EMBASSY SUITES DETROIT 10/21/2018 1:39:00 AM

DATE	REF NO	DESCRIPTION	CHARGES
10/21/2018	1413543	*EIGHTY SIX HUNDRED LOUNGE	$17.00
10/21/2018	1413602	GUEST ROOM	$131.00
10/21/2018	1413602	MI STATE TAX	$7.86
10/21/2018	1413602	OCCUPANCY TAX	$5.90
		WILL BE SETTLED TO [redacted]	$161.76
		EFFECTIVE BALANCE OF	$0.00



DETROIT MI TIED AGENT 1

Customer Service Number
1-800-642-1978
North Terminal
Detroit, MI 48242
Parking Facility
[Line 1 of Customer Serv
[Line 2 of Customer Serv

Card Account : [redacted]
Card Type : [redacted]
Authorization Code : [redacted]

Cashier : 0 Seq #: 026
License Plate : [redacted]
Ent : 05:51 10/22/18 Lane 17
Exit: 19:22 10/22/18 Lane 24
Duration: 00(s) 13H(s) 31M(s)
Rate Code: 22 Shift: 036

FEE	$	24.00
AMOUNT TEND	$	24.00
CASH	$	0.00
CREDIT CARD	$	24.00
CHECK	$	0.00
CHANGE	$	0.00
PAID AT CT	$	24.00

Taxes Included

*** Thank You ***
*** Customer Copy ***

From: Atkinson, Rick
To: Jennifer Johnstone; Knull, Helen; Durante, Tamara
Cc: Carter, Kasey; Fouty, Amy; Brushaber, Sarah; Kesler, Seth; Drone, Denzel; Packard, Elyse
Subject: RE: US Field Hockey Futures Elite Training Site
Date: Monday, October 22, 2018 3:41:33 PM

Jen:

Still do not know date of the Spring Game, so cannot approve any April dates.

It looks like the March dates are ok, but you did not give me any times. There are things occurring on the field/track on some of the dates, so please specify a time of your clinics.

April 6 and 7 are a definite NO. It is the weekend of the Spartan Invite Track Meet.

May 4 and 5 look fine for you.

Will update you when I have more information from Track, Lacrosse club, and Football.

RICK D. ATKINSON, J.D.
ASSOCIATE DIRECTOR OF ATHLETICS
535 CHESTNUT
W239 SPARTAN STADIUM TOWER
EAST LANSING, MI 48824-1025
atkins27@ath.msu.edu
(517) 355-1633 office
[redacted] cell

From: Carter, Kasey
To: Allen, Timothy; Proulx, Simone; Mejorado, Cynthia; Lunsford, Bradley; Cox, Cody; Fouty, Amy
Subject: RE: with address
Date: Monday, October 22, 2018 10:09:26 AM

Tim-

If the bus is just picking up the driver can pull into 62 East (lot right outside the north end) along the curb that is closest to the tunnel and it shouldn't be an issue as long as they are not blocking any spots.

Let me know if you have any other questions. Thank you.

Kasey

From: Allen, Timothy
Sent: Monday, October 22, 2018 7:14 AM
To: Proulx, Simone <[redacted]>; Mejorado, Cynthia <[redacted]>; Lunsford, Bradley <[redacted]>; Cox, Cody <[redacted]>; Carter, Kasey [redacted]; Fouty, Amy <[redacted]>
Subject: FW: with address

Good Morning-

Attached is the itinerary for the [redacted] visit tomorrow AM.... As you can see they arrive at 10:00am and then will walk over to the stadium at 11:15 to tour the Lockerroom, Engagement Center and then on to the field for a few minutes to experience Spartan Stadium.....

Wanted to make certain Ben, Casey and Amy were in the loop on this as MD has his press conference at that time also.... They will be loading the buses and gone before it end.

Casey- Any suggestions where the school bus can pick them up outside the North Tunnel???

It's about [redacted].....

Thanks
Tim

MICHIGAN STATE UNIVERSITY

SPARTAN FOOTBALL

October 23, 2018
Willow School- 1012 W Willow St, Lansing, MI 48915
Tour Hosts-Iza/Haley/Shelby/Jack

10:00	Arrive at Skandalaris Football Center
10:05	Tour Football Skandalaris Football Center
	-Lobby
10:10	EQ/Apparel/Locker Room
10:20	Weight Room
10:25	Indoor facility
10:30	Training Room
10:35	Team Meeting Room- Welcome
10:40	Hi-Lite Video
10:45	Spartan Player Introductions
	-Welcome Comments
	-Education
	-Dream Big
	- Read to class
11:15	Walk to Stadium
11:25	Enter through tunnel
	-Engagement Center
	-Locker Room
	-Field Access
11:50	Board Bus- North End Zone
11:55	Depart for Brody Dining Services
12:00	Lunch at Brody Dining Services

135 Duffy Daugherty / Skandalaris Football Building, East Lansing, MI 48824